

MANUFACTURERS' RECORD.

A WEEKLY SOUTHERN INDUSTRIAL, RAILROAD AND FINANCIAL NEWSPAPER.

VOL. XXXVI. No. 16.
WEEKLY.

BALTIMORE, NOVEMBER 9, 1899.

\$4.00 A YEAR.
SINGLE COPIES, 10 CENTS.

Manufacturers' Record.

PUBLISHED EVERY THURSDAY BY THE
Manufacturers' Record Publishing Co.

RICHARD H. EDMONDS, President.
OFFICE: MANUFACTURERS' RECORD BUILDING,
BALTIMORE.

RICHARD H. EDMONDS,
Editor and General Manager.

THOMAS P. GRASTY,
General Staff Correspondent.

SUBSCRIPTION, - - - \$4.00 a Year.
TO FOREIGN COUNTRIES, - - 25s. 6d. a Year.

BALTIMORE, NOVEMBER 9, 1899.

The South of Today.

In order to present to the world a full story of the South of today the Manufacturers' Record will shortly issue a special Supplement covering the industrial progress to date and the outlook for the future. The contributors to this issue will include many of the most noted men of the South—men who for years have led in its upbuilding, and experts who will deal broadly with the foundation of natural resources on which Southern development rests. We believe that this Supplement will be the most important publication ever issued in the interest of the South's material advancement. The aim will be to cover as briefly but as comprehensively as possible the most telling facts regarding what has been accomplished and what the prospect for the future is, in order that the busy man may grasp the whole subject without wading through an undigested mass of uninteresting articles.

This Supplement will be sent to every subscriber to the Manufacturers' Record, and in addition to this the Southern Railway Co., appreciating its importance to the South, has purchased 10,000 copies, which will be mailed to leading business men, manufacturers and capitalists in the North and West. A copy will also be sent to every bank and banker in the South, and to many in other sections.

The mill operatives have been agitating for an increase of wages; consequently the Fall River Herald resumes its lectures upon labor in the South, and in doing so expresses doubts as to the reliability of statements by the labor commissioner of North Carolina that the number of children employed in factories in that State has decreased 50 per cent. in three years. The desire to question the figures is not surprising. Such a development in the labor situation tends to weaken whatever force there may be in the lectures on Southern labor delivered for the benefit of Northern labor.

Lessons in Trade.

Recent developments in the iron trade have justified the candid attitude of the London Iron and Coal Trades Review toward the future of the industry in Great Britain. It now derives considerable satisfaction in calling attention to the fact that it felt bound "to give warning of the rocks ahead to urge manufacturers to prepare for a conflict with our kin across the sea, and to point out what appeared to be the most vulnerable points of attack." At the same time it takes credit to itself for improvements that have been made or that are now under way in the iron and steel-manufacturing plants in England under stress of competition. These improvements, it says, are being made at a pace that would hardly have been deemed possible a year or two ago, as British manufacturers have been put upon their mettle in realizing that they will only be safe at the top. It mentions among the improvements the efforts of the ironmasters of Cleveland and of the hematite ironmakers of the West Coast, South Wales and the North of England to double the output of their furnaces; the construction by the Lanarkshire Steel Co. of what is expected to be the most powerful beam and girder mill in Europe; the practical reconstruction of the armor-plate plants of Sheffield and Glasgow, and improvements in foundry products and the machinery trades generally. It expresses the belief that in a few years at most the blast-furnace products of England will be quite abreast of that of the United States, and that when that state of equality has been reached much less is likely to be heard of the superiority of American conditions. It says:

Much is still possible with advantage in the development of our mechanical industries. But no one who is even imperfectly acquainted with the facts can fail to admit that the improvements introduced since 1897 have been simply phenomenal. All the best things in American and German have been more or less fully adopted, and we have, at the same time, retained what were regarded as the best features of our own special engineering system. The capital expended in these several directions within the last three years must have been enormous. The work is only half done, however. A vast amount of reform is now in progress. The rest will follow when the most conservative firms have seen, as they will do, that they must either march with the times or go to the wall.

The advice which the Iron and Coal Trades Review has been giving British manufacturers may well be considered by those of America. It has doubtless been effective in stirring up progressive Englishmen to meet the sudden, though not unexpected, competition of the United States, and their promptness in recognizing the threatened competition and in preparing to meet it shows that the United States cannot afford to depend alone upon their unsurpassed natural resources. The scepter of trade in this particular may be passing from England to America, but the statements of the Iron and Coal Trades Review are calculated to show that it has

not passed, and that it will not be relinquished without a struggle.

Here is a warning for American diplomacy. As English manufacturers are learning to appropriate the best of American equipment for industry, so American diplomatists must learn to appropriate the best of English diplomacy as the affairs of minor peoples are reorganized. The mainspring of English diplomacy is the purpose to advance English commerce—to gain wider markets for English manufactures. With that object in view English arms are carried to all quarters of the globe, and that is the motive of every union entered into by Great Britain or every rupture of relations induced by that nation. If another nation may be of service to Great Britain in building up Great Britain's trade, that nation may expect to bask in the smiles of English statesmanship. If another nation interferes with Great Britain's commercial ambition, or threatens, as in the case of the United States, the supremacy of English manufactures, the other nation may not find its friendship quite so strong. That is the simple British principle which America should never forget amid the aroma of bouquets thrown by British diplomacy.

Hoping Against Facts.

Discussing radical developments in the business world during the past few years and their sweeping influence, the New York Evening Post says:

Cotton manufacturers of New England have been much disturbed by the competition of Southern mills, particularly in the coarser grades of goods. Their Southern rivals hired cheaper hands, who could be employed more hours a day and who are not controlled by labor organizations. Some Northern manufacturers concluded that the only thing to do was to build mills in the South themselves, and such plants have been established by capital from this part of the country. But the movement has been checked, and a great corporation of Manchester, N. H., has just abandoned a scheme to begin operations in the South. The reason is the discovery that conditions in the South regarding wages, hours of work and labor unions are steadily approaching those in the North, the strike for higher pay, shorter days and the control of industries by the employe having already been domesticated, even as far away as Texas.

These statements of the Evening Post must be regarded as suggestive rather than historical, and intended to discourage the Southern trend of the textile industry rather than to sympathize with the South at the possibility of its ever suffering the ills which have come to other manufacturing sections. It is predicated upon the absurd and exploded theory that the South, as a cotton manufacturer, has but one advantage—its labor supply—over New England, and fails to note that the class of labor now making cotton manufacturing such a success in the South is practically the same as that which built up the industries of New England before it was crowded out by an element incapable of assimilating the American idea of individual liberty. In the meantime the position of Southern

mills, strong in their nearness to the supply of raw material, is being strengthened by wise investments in equipments of up-to-date machinery and by the conduct of the financial and mechanical operations upon a business basis rather than upon a family one. Not for a long time, if ever, will the hopes of the New York Evening Post, revealed in its editorial, be realized.

Looking Forward.

The New York Commercial quoted an export buyer in warning against a tendency of cotton manufacturers to neglect foreign markets during the present activity at home. The Commercial regards this tendency as an old story, and says:

When home trade is good our manufacturers have no use for the export trade, and will, without compunction, destroy the bridges to export markets that have been built at great cost during periods of depression in the home market. When another period of depression comes, as it surely must, the bridges must be repaired at great expense of time and labor, or must be entirely rebuilt. A few domestic manufacturers and agents have learned this lesson and are catering to their export trade in the full knowledge that a horde of hungry foreign manufacturers are ready to grasp it when a fair opportunity offers.

Such sellers are adjusting their prices to meet a world competition. They are obtaining a round advance for their goods, but not the extravagant prices demanded of home buyers. Their view of the export-trade problem is not restricted to the confines of this country, as is that of too many who are dabbling in foreign trade. They recognize the fact that the cotton-goods production of this country is constantly expanding, and that only in periods of greatest prosperity can the home market begin to absorb the present production, while the annual output of heavy brown goods has already exceeded the maximum consuming demand of the home trade. They recognize, further, that the average profits accruing from the export trade for any considerable period of years is greater than those upon the same variety of goods from the home trade. During periods of depression at home the export trade almost invariably pays better prices than can be realized in the home market. It may be slower to meet an advance, but the resultant profits for a decade are invariably larger than those in the home market. The time for experimenting with the export trade and for consigning its management to boys is past.

All this is sound reasoning, but however careless the manufacturers of other sections may be, the cotton-mill men of the South are looking ever ahead in their desire for the preservation and extension of their export trade, as indicated by the action last week of the Cotton Spinners' Association at Charlotte, N. C. They thoroughly appreciate the importance of maintaining conditions in China whereby the foreign market for American cotton goods may be strengthened, and they have set forth succinctly, but unmistakably, the plan which they believe will conduce most thoroughly to that end. In that the Southern mill men have taken the position of leaders. They have practical justification for this, and the outcome of their resolutions will be eagerly awaited by persons interested in the textile industry, not only in the South, but in the whole country.

Bits of Sound Advice.

In the last few days two very significant editorials have appeared in influential Southern newspapers regarding the position of the South toward capital from outside interested in its development. The Raleigh Post, commenting upon the disposition of Northern and Eastern capitalists to invest in the South, dwells upon its vast resources in the way of timber, metals, coal, products of the soil, natural power and climate, in addition to facilities for reaching the markets, and upon the need of capital and population to develop the opportunities, and says:

All that is wanted now to accelerate this movement and increase the supply of money for investment and the development of useful enterprises in the South is the assurance that such investments will receive the protection of just and equal laws, honestly administered, free from the assaults and the exactions of demagogism.

Supplemental to this is the editorial of the Charleston News and Courier. Alluding to criticisms of the federal Judiciary, it says:

If the people of North Carolina and other Southern States wish to prevent Federal interposition in behalf of those who have invested their money in Southern enterprises they must insist upon fair and equitable treatment of all corporations, railroad or otherwise, which have come South for the transaction of legitimate business. . . . There is a far better field in the Southern States for the profitable investment of capital than there is in the prairie States of the far West, but the capital will not come this way if it is to be held up in the courts and taxed to death with the sanction of the law. We believe in local self-government, but local self-government must be honest government, or it will be the most oppressive. The people of the South, whatever their right of complaint against federal interference in local affairs, are themselves largely to blame for the conditions which compel outside investors to seek relief and protection from the federal courts.

No one can successfully dispute the honesty of conviction of these two newspapers, or their right to speak for the best interest of the South. Both are working to the best of their ability for the upbuilding of their respective States. Both believe in conservative progress. Both, in maintaining the principles revealed in their editorials, are contributing in the most practical way to conservative progress.

Seizing Opportunities.

The consummation of a very important deal by which John W. Gates of Chicago and his associates have become the owners of some splendid iron-ore properties in Alabama and Tennessee, the sale having been made by Mr. N. C. Elting of Florence, as stated elsewhere in this issue, calls attention to the remarkable work of Mr. Elting in the upbuilding of Florence and the surrounding country. What he has accomplished shows what others might do. Mr. Elting is a young man who located at Florence just as the land boom of ten years ago was collapsing. Not dismayed by the extreme business depression which followed, he went to work energetically, but on a conservative basis. He organized the First National Bank of Florence, with a capital of \$100,000, and put it on a solid paying basis. Then he followed this with the Cherry Cotton Mills, capital \$200,000; the Florence Loan & Trust Co., capital \$50,000; the Florence Land Co., capital \$70,000, which was a company designed to save from complete wreck and ruin one of the old land companies, and then the West Point Mining Co., with an investment of \$80,000. He is treasurer of the cotton mill, cashier of the bank, president of the loan company, president of the land company

and secretary and treasurer of the mining company. Without an exception every enterprise has been prosperous and pays liberal dividends. The Manufacturers' Record, ever ready to commend those who are leading in Southern upbuilding, congratulates North Alabama upon the work of Mr. Elting. May every section, every town of the South have other Eltings.

In a letter to the Manufacturers' Record Mr. A. T. Rowand, president of the Union Boiler Tube Cleaner Co. of Pittsburgh, Pa., writes:

We are very much pleased to say that our advertisement in your paper has caused a great many inquiries.

THE ENGLISH VIEW.

Matters to Be Considered in the Iron Trade.

In discussing the present activity in iron and the probable extent of its duration, the London Iron and Coal Trades Review says:

"Of the actual existence of an almost unprecedented demand for iron and steel there was no room for question. Our columns have for many months past borne constant and unqualified testimony to the fact. As to the duration of this prosperity, however, there is room for considerable difference of opinion, and we are by no means surprised to find that such difference of opinion actually exists. The wisest men are, not unnaturally, the most chary as to committing themselves to forecasts. It is well not to prophesy unless you know, and no one can claim to know much more than his neighbors as to what the future has in store. There is, however, one point on which opinions appear to be pretty well agreed. We are guaranteed a continuance of our prosperity for at least a year to come. Most of the iron and steel works have already sufficient work on hand to keep them busy for nearly another year. The industrial situation all over the world justifies the expectation that there is much more work ready to hand. The United States and Germany—the two largest producers of iron and steel, excluding our own country—are almost passing through a famine, and cannot get enough to meet their urgent requirements. In this country, however, there appear to be fewer complaints of scarcity, whether of raw materials or of pig-iron, than there were a few months ago. It is satisfactory to find that the movement of prices is not being affected to any extent worth speaking of by foreign competition, and that values are fixed mainly by the conditions of supply and demand at home. The fact is that despite our large imports of iron and steel during the first nine months of the year, the countries that would otherwise be competing with us are now sending us materials, largely because they cannot help themselves. In other words, they are fulfilling contracts made when prices were lower than they are today, and many of the sellers would gladly keep their supplies at home if they were at liberty to do so. The large increase of our imports, which would otherwise have a very ugly look, is, for that reason, less serious than it would appear.

"There are many features of the present trade situation that do not appear in these statements of our correspondents, but which, nevertheless, confirm them, and are matters of the utmost satisfaction. Some of the more prominent of them have already been referred to in our columns. A notable example is the increase in the recent demands for steel rails, which almost guarantees that our rail mills will be much more fully occupied in the later than they were in the

earlier part of the year. Another is the remarkable revival in the tinplate trade, which has called into active operation a hundred more mills than were engaged at this time last year. The rail and the tinplate branches were the most depressed and unsatisfactory of all up to a month or two ago. It would now appear as if they also were about to enjoy an inning—and not before time. The wire-rod trade has been to a large extent galvanized into new life by the American demand, and we have already recorded that one of the principal firms in this industry is almost wholly engaged on American orders. The concerns whose specialties are war and shipbuilding materials are all as busy as they can be, and they are apparently likely to remain so. Nor is it likely that the present war in the Transvaal, whatever its issue, will materially affect the trade, for the wants of that small republic have hitherto been met mainly by Germany, and it is therefore the German houses that are most likely to suffer. The only danger to be apprehended is the restlessness of labor and the possibility of disputes as to wages. At the moment this danger is not pressing. On the contrary, there has rarely been a period of good trade during which labor movements were less aggressive. The issues of the engineering and South Wales strikes appear to have led the workmen to think more deeply on the folly and futility of strikes, and to predispose them to accept arrangements based on the sliding-scale system more readily than formerly. Employers, moreover, have for the most part readily admitted the workmen to a reasonable share of the good things that are going, so that there has been no solid cause for dissatisfaction or revolt. In some cases steelworkers have had their wages increased by fully 20 per cent. In Cleveland, only a few days ago, the miners were given an advance of 17 per cent. at one stroke. In all cases alike, the workmen have had substantial advances, and if more are claimed, and justly due, we doubt not that they will be amicably arranged."

A Question from Texas.

Editor Manufacturers' Record:

Within ten miles circumference of the town of Rusk, Cherokee county, Texas, there lies a deposit of iron ore equal to almost any other, and superior to others being successfully operated today in different parts of the South and in different parts of the United States.

The conditions warrant, and the experts say that pig-iron of a superior quality can and it has been made at a cost of \$8.40 per ton, and by the antiquated processes now obsolete in the up-to-date iron districts. There are three furnaces here, two 50-ton and one 25-ton; the latter is in operation, the others are idle. Experts of the highest character, furnace architects, practical operators and furnace owners have visited the properties, all satisfied fully, yet they are idle.

There is a railway running daily right through the section, and another assured. The timber is in great abundance for fuel. Lignite has been tested, and is satisfactory to the testers, and it is deposited so as to cost \$1.75 or less per ton.

The little 25-ton furnace is using its output in making sewer water pipe and in castings generally at a profit of 68 per cent. over cost of production. The supply of iron and its products is short to an extent never known. Iron lands can be bought at prices lower than in any other iron section. Everything seems most favorable. Now, sir, as a prophet, say why are these fields idle?

JOHN M. CLAIBORNE.

Rusk, Texas.

ORE PROPERTIES BOUGHT.

Important Iron Deal in North Alabama.

[Special Cor. Manufacturers' Record.]
Florence, Ala., November 6.

The most important iron-ore deal ever negotiated in this vicinity has just been consummated by Messrs. A. A. Berger and N. C. Elting of this city, president and secretary and treasurer of the West Point Mining Co., respectively.

The entire assets of the West Point Mining Co., which controlled a large amount of the brown-ore fields of Northern Alabama, have been sold to the United States Iron Co., which has just been organized in New Jersey with a paid-up capital stock of \$1,000,000. The deal takes in all of the personal property belonging to the West Point Mining Co., including washers and equipment, and also all of the personal property formerly belonging to J. King McLanahan of Hallsburg, Pa., formerly operated at Pinkney, Tenn., together with the Wilson, Hyde, McIntosh, Hurst, Hamilton, Douglass and Richardson ore properties at Russellville, Franklin county, Alabama; the West Point Mining Co., Brunell, Herron, Hollis, West Point Iron Co., Couch, Van Leer, Powell, Hamilton, Smith, James Smith, Bivins and Emmett properties, in the district around West Point, Tenn.; also the valuable Laney properties in Eastern Alabama, near Anniston.

These properties aggregate about 6000 acres of land, upon which it is estimated there are 30,000,000 tons of brown hematite ore, averaging 52 per cent. metallic iron, and worth, at a very conservative estimate, at least \$1,000,000. These lands have been acquired in the past year by the West Point Mining Co., and the transfer to the United States Iron Co. was completed on Thursday, when the deeds were signed and the transaction closed.

The West Point Mining Co. was organized one year ago by Messrs. A. A. Berger, an experienced iron man, and N. C. Elting, cashier of the First National Bank of Florence. The success of this company has been the most phenomenal. From a small institution, with a paid-up capital stock of \$50,000, it expanded by judicious investment until it controlled one of the most valuable aggregations of brown-ore properties in Alabama and Tennessee. Its success exceeded by far the expectations of the original promoters.

The gentlemen who negotiated the deal are expert iron men, and they have rendered the Northern Alabama and Tennessee iron-ore sections a great service.

The officers of the United States Iron Co., which demonstrates its belief in this section by investing more than a million dollars at one time, are John W. Gates, president; C. G. Gates, treasurer; Wm. Edenborn, J. W. Gates and Col. I. L. Ellwood, executive committee. They are gentlemen of the highest character in the business world, and men with brain and money power sufficient to carry out their immense development undertaking. John W. Gates is president of the American Steel & Wire Co., a corporation with a capital stock of \$90,000,000, and the largest steel-wire producers in the world. Mr. Gates, together with Messrs. Edenborn and Ellwood, are the members of the executive committee of the American Steel & Wire Co.

The new owners of these immense properties are already operating the ore-beds at West Point and Pinkney mines, and they are increasing their facilities preparatory to a full development of the entire purchase. The coming of this corporation into this territory is opportune, and their further steps will be watched

with intense interest by everybody who is interested in the progress of the Southern iron industry.

DEVELOPING NEW FIELDS.

Uncovering More Mineral Riches in the Birmingham District.

[Special Cor. Manufacturers' Record.]

Birmingham, Ala., November 7.

The market for iron the past week was practically unchanged. There was a fine inquiry far beyond the capacity of the furnaces to satisfy; so while we had a market that can be characterized as satisfactory because it absorbed all that was offered, it yet would have been much more active had furnaces been able to meet the demand. As an instance of the demand, one order was for 20,000 tons gray forge and mottled iron, and the price offered was what the furnaces asked. The delivery was during 1900, up to and including July. It was accepted to 8000 tons only, as engagements for that grade, already made, would not permit the selling of any quantity over that amount. So large have been the sales made that sellers now put on their "specs" when important orders for first half of 1900 come in. Some large interests came into the market, and their requirements were large. They were only partially satisfied, and they had to be content with what they could get. This was predicted in these letters, and it still looks as if their wants will, when they come in again (and come they must), result in sustaining prices. The bulk of sales were at \$19 for No. 1 foundry, \$18 for No. 2 foundry, \$17 for No. 3 foundry and \$16 for gray forge and mottled. There were sales at prices above these quotations, and there were sales below them. Deliveries are better than they were, as the railroads are still out hunting cars, and are supplying shippers more freely. But an increase in cars could yet be made without satisfying the demand.

The furnace property at Jenifer, in the Anniston district, has been sold, together with its holdings of several thousand acres of land, to a company of which W. E. Weller of Gadsden is president. It has been rated as an 80 to 90-ton furnace, and will probably be increased in capacity. The price paid was \$175,000, and the owners will put it in operation as soon as possible. The Iron City Mining Co. was recently organized, with a capital of \$15,000, of which J. W. McQueen is secretary and treasurer. The location is but a short distance east of Anniston. One ore washer has been erected, and another is soon to follow. Though hardly full-fledged, they have already made contracts that will absorb all their output up to 1900. J. E. Lacey, who is interested in the brown-ore fields around Cave Spring, Ga., has made contracts for delivery in this district of 500 tons daily. These are mentioned to show the condition of the mining industries. In one instance the royalty on a lease paid the owner \$3250 per acre. But that is far above the average.

Some remark has been caused by the fact that we are reaching out further and increasing the length of our haul on ore. The explanation is that richer fields have been made available by railroad extension, and the greater cheapness of mining is more than compensation for increased transportation charges. The truth is we have but commenced the development of the mineral riches of this region. They are so widespread and so far-reaching that only personal information concerning them would satisfy the investigator that there was no exaggeration concerning them.

A company has been formed for the

adoption of gas in place of other heat in stoves, whether for coal or wood. Petroleum is used, and the process for changing it into gas is an instantaneous one, and perfectly free from danger. It eliminates soot and all dirt, and as the pipe two feet above the stove is cool, the danger from fire is reduced to a minimum. It can be applied to locomotives as well as to ordinary stoves, and is destined to revolutionize the culinary department of the ordinary household. The cost is trifling. One large dealer, who personally investigated the process and satisfied himself of its practicability and economy, has ordered four cars of them weekly, shipment to commence when ready. J. M. K.

The Iron and Metal Trades.

[Special to Manufacturers' Record.]

New York, N. Y., November 9.

In its weekly review the Iron Age says: "We record further heavy purchases of pig-iron in the leading distributing centers. Chicago notes sales of foundry irons of different grades aggregating about 50,000 tons, in which is included one block of 10,000 tons. In the New York district one large manufacturing interest has taken about 8500 tons for delivery during the first half of 1900, and another has purchased a large block for the second half of the year. The Eastern furnace interests have advanced prices further, and as high as \$27 has been paid for quick delivery on small lots of No. 1 Lehigh foundry.

"In Bessemer and basic iron one large consolidation has purchased in the Central West about 70,000 tons of metal, all for next year's delivery.

"Our monthly blast-furnace statistics show that the active capacity of the coke and anthracite furnaces has increased by 8981 tons weekly to the magnificent total of 281,409 tons weekly. Yet the very small stock in furnace yards has been drawn upon a little more, and the total stock in warrant yards has declined to 10,300 tons.

"Thus far only a few of the furnaces which were expected to go in after a long period of idleness have actually become producers. There is still, notably in the South, quite a considerable number of them which are still to be heard from. During the next few months they will slowly fall into line and may add somewhat to the make. In the whole Central West little additional capacity is available outside of the two furnaces of the Ohio Steel Co. at Youngstown, now being completed.

"There is little that is new so far as the ore situation is concerned. There have been some sales of next season's ore, but the great purchases are still to be made, and it seems doubtful, according to our Cleveland advices, whether anything will be done this year or next.

"It is understood that the great majority of the contracts for Connellsville coke have been closed, and this week will probably witness the end of the movement.

"The situation in billets is still obscure. Some of the great contracts for next year are still pending.

"The decline in muck bar is attracting some attention, increasing, as it does, the spread between billets and bars.

"In some lines of finished iron and steel the market is easier. This is notably true of sheet iron, galvanized sheets, skelp and in some sections in plates. Structural material remains firm, although it is hinted that some of the arrangements forming a part of the bridge consolidation may possibly cause some friction among beam-makers.

"There is very little doing in the export business. The shipments of foundry iron

are likely to fall off sharply since it is understood that some of the old contracts have been bought off by American producers. There is some figuring going on in cast-iron pipe. In merchant pipe an order for Buenos Ayres which was declined here has been placed in Scotland.

"Little is being done in importation, aside from some lots of old material.

"In the metal trade the most conspicuous feature has been the sharp decline in spelter, putting that industry thoroughly out of gear. Copper remains dull, in spite of the recent decline. Tin, too, is weaker. Nickel alone has been recently advanced in price."

In Southwest Virginia.

[Special Cor. Manufacturers' Record.]

Bristol, Tenn.-Va., November 6.

The Bristol iron furnace, the property of the Virginia Iron, Coal & Coke Co., has been in successful operation now for over one week turning out 150 tons of iron a day. It will ultimately have a daily capacity of 200 tons.

Major H. C. Wood is in Philadelphia purchasing machinery with which to increase the output of the Diamond Ice Co. of Bristol twenty-five tons per day.

Dixie Tannery of Bristol has added a new 150-horse-power Corliss engine and a new three-story frame building 60x160 feet. The present output is 200 heavy hides per day. This will soon be increased to 300.

Work on the big \$400,000 pulp plant will be begun within the next sixty days by the Columbian Paper Co.; Thos. Bohannon, Philadelphia, president, and S. H. Egolf, Buena Vista, Va., general manager.

The Crescent Horseshoe Works at Max Meadows, Va., has increased 10 per cent. the wages of common laborers, and more than that per cent. the wages of skilled labor. It is the property of the Virginia Iron, Coal & Coke Co.; 400 men are employed in these works.

C. R. Baird & Co. of Philadelphia have bought the Hibernia Mining Co.'s lease of the iron-ore mines at Allisonia, Pulaski county, Virginia, for \$10,000. Ore will be used therefrom for their West End furnace at Roanoke, Va.

New Furnaces for Birmingham.

It has been but a few weeks since it was rumored that the Republic Iron & Steel Co. intended to build a new furnace at Thomas, Ala., in the Birmingham district. Final arrangements ensuring the construction of this proposed furnace and of another have now been completed, and the company telegraphs the Manufacturers' Record that it has plans for one furnace 18x85 feet, to be followed later by an additional one of same size. Mr. A. W. Thompson, member of the executive board, and C. I. Rader, manager of blast furnaces for the company, have been in Birmingham for some days and completed the arrangements as stated above.

The fact that the William R. Trigg Shipbuilding Co. of Richmond, Va., is prepared to enlarge its shipbuilding plant if the channel of the James river is deepened to twenty-two feet to Richmond, will be used by Virginia congressmen in urging the appropriation necessary for the improvement.

During the last ten days of October 5981 tons of pig-iron were exported from Alabama through New Orleans. The iron went to Genoa, Antwerp, Hamburg, Rotterdam and Copenhagen.

Work has begun at the Newport News shipyard upon the contract to be filled for the Pacific Mail Steamship Co., and the keel of the first vessel has been laid.

TEXAS OIL AND GAS.

Developments in the Corsicana Field.

[Special Cor. Manufacturers' Record.]

Corsicana, Texas, November 6.

The price in crude oil here has again advanced in price. Ninety-seven cents per barrel is being paid by the refinery people, and there is a ready sale for every barrel produced. There is not a great amount of "wild-catting" going on now, but the main "leads" from the center field are being carefully followed and much better wells are being secured than heretofore. It is confidently expected that the price of oil will be \$1 per barrel by January 1, which will be double the price paid on the opening of this field.

Dr. M. P. Cullinan and Mr. W. H. Staley are putting in natural gas lines here, claiming they will soon be able to furnish all manufacturing plants gas for fuel, as also to the citizens who may want to place it in their homes. It is said the supply of gas now is sufficient to supply this city for next forty years. With oil in great quantities, and also natural gas, Corsicana offers great advantages to manufacturers, especially to cotton manufacturers, as the 100,000 bales of cotton raised annually in this county furnishes ample raw material.

Local capitalists, including Capt. James Garitty, Hon. Geo. T. Jester, Dr. S. W. Johnson and Capt. Charles H. Allyn, have organized for the purpose of building the Corsicana & Southeastern Railroad from here to Sabine Pass. Capt. F. C. Hand, who is chief engineer, and his assistant, Mr. Wm. M. Elliott, left with their surveying corps Saturday. This road was projected in 1893 and a survey made from here to Buffalo, in Leon county, but the panic came on and capital could not be secured to build it. It is safe to say it will now be built. The enterprise will have the support of the Kountz brothers of New York.

Capt. James Garitty, ex-Senator Roger Q. Mills and son, Major Charles H. Mills, and S. W. Bogy have purchased the Bogner tract of 154 acres of land adjoining city limits, and will put in an addition to the city. This is the most valuable suburban acreage property here. S. W. Bogy, the real-estate and loan broker, will make sales of the property for the company.

A street railway is needed here now, and parties who will buy electric-light and gas plant and put in a street railway will receive a liberal support. Anyone wishing to investigate this matter address S. W. Bogy, Corsicana, Texas.

Houses are going up by the dozens in every direction, and not a vacant house of any kind here. There is an opportunity here for some one who would erect houses to sell on easy payments and to rent.

The Associate Reformed Presbyterian Church is under construction. It will be of brick and cost \$10,000.

It has been decided to build the Hardy-Peck Building, three stories, at a cost of about \$35,000.

Mr. T. C. Stribling recently purchased a large tract of land here, and has, at a depth of 675 feet, found a good lubricating oil—something entirely new in this field.

S. W. BOGY.

The Young Men's Business League of Chattanooga, Tenn., has begun a movement to secure conventions for that city as one of the means of advertising it and promoting its growth.

The output in the Joplin (Mo.) district during the week ended November 4 was 8,524,810 pounds of lead ore and 1,045,380 pounds of zinc ore, valued in all at \$182,117.

MOVING TO AMERICA.

Plans of a German Textile Manufacturing Firm.

German papers discuss and copiously comment on the late news that the firm of Bruhm's Soeline of Gera, one of the largest textile-manufacturing concerns in Germany, is now about to establish a factory and branch house in the United States. One of this firm's partners, Mr. Henry Bruhm, has been in the United States for some time past to carry out this purpose. Referring to this United States Vice-Consul Simon W. Hanauer at Frankfort writes:

"It is confidently expected that this enterprise will be as successful as those of the firms of Stohr & Co. (worsted-yarn spinners), which recently established a branch factory in Passaic, N. J.; Georg Hirsch of Gera, and Arnold of Greiz, which also have factories at Passaic. These German ventures in the United States have been very profitable. A report is now current that manufacturers of Gera have formed a syndicate aiming at the erection of new worsted-textile factories in the United States. News also comes from Rhenish Prussia (the Crefeld and Barmen textile-manufacturing district) that manufacturers of silk and woolen textiles there purpose to erect branch factories in the United States.

"The straits in which this German industry have been placed by the partial shutting off of the important American market, owing to the working of the tariff, has necessitated this new departure.

"For our country this move is of much greater importance than appears on the surface. It not only means new capital and skilled labor, whereby the country's population and the national wealth is increased, but it strengthens our capacity to compete in the world markets with the very country from which this skill and monetary force has been drawn. This truth is better known and more keenly felt by German manufacturing circles and their organs of the press than by our own people. This transfer of manufacturing and financial power is the handwriting on the wall telling of the coming decline of European nations as purveyors for the outside world, and the rise of the vigorous and ingenious nation of the Western Hemisphere to succeed them."

America in South Africa.

United States Consul-General Stowe at Cape Town sends the following suggestions about American trade in South Africa:

"Among the orders placed for goods in the mechanical line last month it is noticed that Collins & Co. of Hartford, Conn., have received many requests for edge tools, which have a great run in South Africa.

Orders for three boilers, viz., one 212 horse-power and two 108 horse-power, have been placed with the Sterling Water Tube Co. of Chicago.

"Several powerful electric cranes for Durban have been ordered, but I cannot find out from whom.

"In the line of electrical machinery, several large orders have gone to England. One order for engines has been given to McIntosh, Seymour & Co., Auburn, N. Y.

"Chicago manufacturers are delivering a match plant in the South African Republic. Of course, all the piping orders are placed in England. Two more refrigerating plants from England are about to arrive.

"While the United States is in the lead in shipments of windmills to South Africa, several are arriving from England, largely copied from the American.

"Brewers' refuse grain would sell

largely here if it could be pressed into briquettes after being mixed with cornmeal, oil meal or some such article of food, and molasses, glucose or other cheap material of this nature. Samples of this refuse grain have arrived, but it is too light, and on account of its bulk, freight rates would be excessive, and consequently it could not compete in price with other cattle foodstuffs.

"I am pleased to note that mantels, wire-screen doors and windows, iron bedsteads, blacksmith drills (hand), overalls, aprons; all kinds of tools, such as hatchets, chisels, bits, augers, etc.; household necessities of tin and iron of an endless variety, prepared foodstuffs; collapsible cots, tables, chairs and bathtubs for camp use; all kinds of ornamental screens, picture frames, picture molding, postoffice supplies, oilcloths, perfumes, pianos, organs, letter-copying appliances, knock-down furniture, confectionery, canned fruit, easels, emery novelties, harness oil, oil stoves, soap, candles, axle grease, cash boxes, electrical belts, scales, lamps, starch, canned vegetables, corn flour, farmers' tools, fire extinguishers, hat-racks, sad irons, school desks, stove polish and many other articles too numerous to mention have been introduced through the agency of this consulate, and as soon as the excitement of the present political crisis has subsided they will meet with sale.

"American mules and horses are arriving in large numbers on private orders, and are sold on ship to the Imperial government. Large numbers are reported to be on the water, imported direct from the United States by buyers of the Imperial government. It is also noted that the government, as well as that of the South African Republic and the Orange Free State, have bought largely of mules, oxen and horses from the farmers of this country."

Cotton and Money.

The Financial Chronicle has been studying the reasons for the apparent stringency of currency and notes that the cotton situation plays a prominent part in it. Commenting upon this fact the Chronicle says:

"Current prices for the staple are nearly two cents a pound or nearly 40 per cent. higher than at the corresponding date a year ago. Speaking in a general way, this means that when a planter sells a hundred bales of cotton, more money, in the first place, is needed to buy it, and in the second place a bigger surplus of cash is left in the producer's pocket. Indeed, last year's price for cotton did not leave anything in the possession of a large number of planters, for with many the transaction netted an actual loss. It is impossible to definitely measure the resultant situation now, because the proportion of planters that raise their crops on borrowed money is so great. For our purpose it is enough to know that the difference in price calls for money to move each 100 bales, and enables every planter to pay for the year's outgoes and to have a surplus, which in the majority of cases is not spent at once.

"Illustrate this situation by the position of our currency supplies before the crop movement began. At that earlier date there was a large amount in banks and in the sub-treasury, that is in sight, and another large amount out of sight. Where was the hidden portion then? That is, where was the portion which at that date was not in banks or the public treasury? Every one knows it was in active work or in the possession of individuals. Today differs, in that there is an additional requirement calling for additional work in moving cotton and additional holdings out of work in possession of cotton planters. The result of these new uses for money is evident enough. With the total stock of currency in the country unchanged, the portion in sight—that is, in banks and sub-treasury—would, in marketing the staple, necessarily be drawn down to smaller limits than on the previous occasion, and this outflow would continue out of sight more weeks, the lost supplies being, for the reasons stated, retarded in their return to the money market."

FOREIGN TRADE.

This department is designed to set forth opportunities for the extension of the trade abroad of American manufacturers, and to record facts about the rapidly-developing commerce of the South.

COTTON GOODS IN AFRICA.

Opportunities for American Textiles on the West Coast.

Mr. John T. Williams, United States consul at Sierra Leone, Africa, writes as follows regarding the opportunities for trade in American textiles in West Africa:

"Few of our manufacturers of cotton goods think of the possibility of introducing their products into the vast stretch of West Africa, yet there is a promising opening here for them. With the enlargement of our plants and the improvement of machinery for the manufacture of cotton goods, there should also be increased effort to secure a trade footing in the tropical countries, as more cotton fabrics are used as clothing here than any other kind of goods. Tropical markets, such as this coast presents, will be consumers for generations to come. European firms show much activity in seeking to secure and control this trade. Their policy is not so much to make enormous profits now as to gain trade advantages for the future.

"Africa, like China, is the land of the 'teeming millions,' and as the natives are brought into contact with Europeans, they are rapidly acquiring the habits and customs of civilization and are becoming large consumers of dry goods.

"Great quantities of prints, sheetings, shirtings, etc., are daily transported to the interior towns and villages by native carriers, by canoes and sailing craft of every kind. These goods are largely imported from England, France and Germany, whose manufacturers cater to native fancy and taste in certain lines of goods. In addition, the representatives of these firms have the advantage of long acquaintance with the African, and have made local business arrangements that please the natives, employing them in the capacity of clerks, bookkeepers, etc., and thus keeping their goods constantly before the mass of native dealers.

"The African, as a rule, is proud; he despises rags and places a premium upon good material. The native merchants, besides being shrewd traders, are excellent judges of dry goods, especially of the durability of fabrics of any kind. Being familiar with climatic conditions, they know what suits their trade, and that only will they buy. The low price of an article, if it is not suited to their taste, is no inducement to buy. It is simply what is wanted that sells. Nothing but the best goods for the cheapest money value should be sent here. Coarse cotton fabrics would not sell well; checks, ginghams, unbleached domestics, etc., are considered too common; on the other hand, satins, prints, muslins, madras, karkis, sheetings and shirtings and various other classes of cotton goods would be popular if of good finish and attractive colors—any modification of blue and white or blue and black in prints or satins would please.

"With the growth of American trade in competition with that of other nations, our manufacturers should pay more attention to making goods for export according to the requirements of the trade sought. Attention given to these details, together with our extensive facilities for superior work, will enable us to win.

"The traditions of the African race should not be ignored in manufacturing for this market; for example, certain animals, trees, plants, vines and even sea-

shells are held in great respect by the natives, having been worshipped by their ancestors. The present generation does not forget these traditions, though many are educated and enjoy the advantages of civilization.

"It is by observing these points that the European exporters have gained such footing in African trade. No doubt in many instances their goods are inferior to our own in durability—starch taking the place of body—yet they sell because African and not European ideas are respected in the design and manufacture of the goods.

"Credit would not be a great inducement except to European houses, as the terms of trade here are generally cash. American goods of all classes would have a better show in this market if there were direct communication between the United States and this coast.

"There is now a spirit of keen mercantile rivalry among the nations seeking this trade, but there is encouragement for American dealers to compete if they will make the necessary efforts along the lines suggested. There are no discriminating tariffs, no restrictive legislation with which to contend. Aside from the 10 per cent. ad valorem duty, this is practically an open field, and with more energy on the part of our exporters of cotton goods their products can find a good market in West Africa."

SAMPLES FOR SMYRNA.

American Manufacturers Urged to Extend Trade.

Editor Manufacturers' Record:

We are much interested in American trade, and especially in the introduction of American goods in this country. We have established, together with an exposition, especial sample rooms. We hope to succeed in our enterprise if a sufficient number of manufacturers would take interest in it.

Articles of American manufacture are admitted to be excellent. Though thousands of articles which are necessary to comfort in America are unknown here, they have but to be shown to be appreciated. Our sample rooms would give to the American manufacturers all the facilities for this purpose, and this with very little or no expense to them. We shall be very pleased to be of any use to American industry, and do not doubt for full success if the exporters and the manufacturers of America would seriously go into the matter.

Smyrna is one of the most important commercial ports of Turkey. Its imports are no less than \$16,000,000 yearly. The port is doubtless the best we have in Turkey, and steamers can find here all facilities for business. As terminus of 1500 miles of railroad, this market dominates the whole trade of the interior of Asia Minor. It is considered the principal market for imports as well as exports of Asia Minor.

Germany is successfully and rapidly superseding other countries in supplying this market with manufactured goods of all kinds. She has accomplished this by furnishing goods which are always suitable for this country and very low in prices. Only the trade in cotton goods is as yet in hands of English manufacturers and exporters. We think that America can compete successfully in those articles if the manufacturers would give more attention to this country and the other principal Turkish markets. It is proper to state here that Smyrna alone imports yearly about \$5,000,000 in manufactured cotton goods, in which America takes a very little part by sending here white and colored drills, cabots, etc., and this also is

partly done through Manchester commission merchants.

Except some flour mills, a yarn manufactory, some foundries of less importance, we can say that there is no industry all over the country, and all manufactured goods are imported from Europe, especially from Germany and England. We know no reason why America should not successfully compete with the said countries. The matter consists only to encourage the manufacturers, for which, we trust, your Manufacturers' Record will be a successful interpreter.

We have here, except for different hand machines, no important sale for machinery, as there are few mills. Generally the German manufacturers get the furnishing of the machines, etc., because they are well represented here, and always are early informed by their agents what our market needs. We think that if the American manufacturers would also establish agencies here they would successfully compete with the Germans. By this occasion we observe that there are here many commission merchants for this purpose, only we must very especially recommend the Americans to be very careful in the choice of agents and to get first exact information.

Our importers buy generally with long credits. The Germans especially allow a credit of four to six months, but cash trade or three months' acceptance, with London bankers' guarantee, could be very easily done if the prices of American manufacturers would show any profit for them.

AVEDIKIAN FRERES.

Smyrna, Asia Minor.

THE ISTHMIAN CANAL.

Wide Scope of the Investigation by the Commission.

The isthmian canal commission, in investigating the industrial and commercial value of a canal across the American isthmus, is endeavoring to secure information about the leading industries of the country, and the relation of the building of the canal to their development. With that object in view the commission has sent circular-letters to American and foreign commercial organizations, statistical bureaus and all individuals and organizations from whom geographical, industrial and commercial information can be secured. The questions concerning manufacturing industries are:

"What are the lines of business under your management, and what is the average annual volume of business done?"

"What are the sources from which you derive most of the materials used in your business, and by what route do these materials come to you?"

"In what markets do you sell the commodities that you handle, and what percentage of your sales are to markets outside the United States?"

"By what routes do you ship your products sold for home markets and for foreign?"

"In what manner and to what extent do you think the opening across the American isthmus would affect your business? How would it affect your purchases, your sales, the shipping routes employed and the volume of business done by you?"

These questions are but an indication of the wide scope of the industrial and commercial basis of the investigation, which will deal also with the effect of the canal upon shipbuilding and shipping. The opening of the canal will undoubtedly have an important influence upon the maritime interests of the United States. Consequently the commission desires to measure the advantages which other countries will have over the United States in trade by way of the isthmus;

whether the United States will be able to develop their transisthmian trade without owning the ships; whether it will hasten the substitution of steamers for sailing vessels, and by creating a demand for more coasting vessels so increase the business of American yards as to enable them to construct all ships more economically, and the effect of the tolls upon shipping and shipbuilding. In this connection also the commission would study the extent to which each of the isthmian waterways would increase the traffic which moves east and west between the central States of the United States and the Atlantic seaboard; the extent to which this east and west traffic would be diverted to the north and south routes of the Gulf ports as terminals, and the effect upon the traffic of the Pacific or transcontinental railroads.

America in Scandinavia.

Arthur E. Kroth, a native of Brooklyn, N. Y., who is now engaged in business at 15 Vallingaten, Stockholm, Sweden, writes to the Manufacturers' Record as follows regarding the introduction of American goods into that country:

"Knowing your valuable paper to be most representative and widely known by our American manufacturers, we herewith beg to encroach on your good nature, and to do our country good, to call the attention of the manufacturers to the fact that we are yet open to make a few more arrangements with reliable manufacturers in all kinds of labor-saving devices, machinery, and, in fact, all kinds of American products suitable for these countries. Articles too much out of our lines we will gladly assist in getting a proper representative here. Our American manufacturers know the superiority of American representation, so it does not need to be stated here to take up your valuable space."

Puerto Rico Openings.

R. B. Lopez, editor of La Correspondencia de Puerto Rico, writing from San Juan to the Manufacturers' Record, says: "American manufacturers have long neglected to export to this country their wares, and consequently English and German manufactures are better known. I believe that with the changes of nationality already made, and with the facilities which the government should provide for the extension of commerce, American factories will be called upon to assume the place which belongs to them today by greater right. To attain that end, however, suitable efforts must be exerted personally. My opinion is that manufacturers should commence at once to make known their goods and to distribute freely their catalogues translated into Spanish. At the same time they should petition the government to introduce into this country free customs regulations."

Enlarging Pensacola Terminals.

A dispatch from Pensacola, Fla., is to the effect that contracts have been let by the Louisville & Nashville Railroad Co. for an additional wharf and warehouses. The warehouses will be each fifty feet in width and 1200 feet long, and calculated to have a storage-room for fully 500 carloads of freight. The addition to the wharf space will be 1227 feet long and 108 feet wide. The warehouses referred to will be constructed on this wharf. Vessels drawing twenty-eight feet of water will be able to load at this point, and additional railroad facilities will be given by the construction of about one and one-half miles of track. A slip for small vessels is to be constructed fifty feet wide and 672 feet in length. The warehouses and wharf will be lighted by electricity and provided

with the necessary machinery for loading and unloading cargo rapidly.

Inquiry from Mauritius.

In a letter to the Manufacturers' Record Goupille & Co. of Port Louis, Mauritius, write that they are anxious to get into direct communication with manufacturers of iron bars, galvanized sheets, corrugated sheets, rivets, washers, felling axes, cane bills, buckets, sickles, West India hoes, linseed oil, turpentine, whitening, panes of glass, bricks, paints, tinplates, Portland cement, cigars, candles, soap, linen goods, flour, jams, preserves, salted pork, lard, butter, biscuits, etc.

Furniture Exports.

A very important export item at present is furniture. The manufacturers state that the demand from Cuba has been very extensive, and that large quantities of hardwood furniture are now being sold in that market. There is a demand from foreign as well as from domestic manufacturers. A dealer at Le Compté, La., has recently secured an order for \$175,000 worth of hardwood timber, which will be sent to a foreign customer.

Machinery for Peru.

In a letter to the Manufacturers' Record, E. Echeopar of Lima, Peru, says: "It is my desire to purchase a complete set of machinery for making sole leather and soles, some modern machines for making foot coverings of all kinds, and a convenient motor for the plant." He desires also to learn whether it would be possible to import into Peru some kinds of footwear.

Jottings at the Ports.

The exports from Norfolk, Va., in October amounted to \$1,611,520, of which \$179,151 represented crude copper and \$13,980 phosphate rock.

Mr. John H. Thompson has been appointed assistant manager of the steamship service in connection with the Plant Railway & Steamship Co.

The exports from Newport News, Va., in October aggregated \$2,304,203. The exports went to Great Britain, Germany, France, Belgium, Denmark, Italy, the Netherlands, Spain and Mexico.

During the five months ended October 31 the exports of grain from Galveston amounted to 9,081,083 bushels, an increase of more than 100 per cent. over the exports of the same period last year.

Vessels of the Singlehurst Line have been added to the port facilities of Galveston. They will run from Liverpool to Brazilian ports, thence to Galveston and back to Liverpool about once in three weeks.

The representative of a Santiago mercantile firm has been visiting various Texas cities to ascertain the opportunity for exporting flour to Cuba by the way of Galveston. He reports that the West Indies offer an extensive market for this product.

A river steamboat was recently built at Macon, Ga., complete and shipped to Dunnellon, Fla., for the use of the Dunnellon Phosphate Co. The boat was constructed of steel, and will draw fourteen inches of water. It is intended for use on the rivers and creeks of Western Florida.

During October the amount of grain exported from New Orleans was double the amount exported during the same month in 1898. The growth of the grain trade there is indicated by the establishment of branches on grain exporters of Chicago, Kansas City and other Western cities.

RAILROAD NEWS.

[A complete record of all new railroad building in the South will be found in the Construction Department.]

PITTSBURG AND THE SOUTH.

The Greenbrier Valley to Form a Link in a New Route from Pennsylvania to the Southern States.

The Manufacturers' Record is informed by a prominent official of the Chesapeake & Ohio Railway Co. that the Greenbrier Railroad, which is now under construction, will be built from a connection with the Chesapeake & Ohio near Ronceverte, W. Va., to an extension to be constructed by the West Virginia Central & Pittsburgh Railway. This means that arrangements have been made to complete the new route, projected several times in the past, between Pittsburgh and the South. This combination will be formed by the Baltimore & Ohio, the West Virginia Central & Pittsburgh, the Chesapeake & Ohio and the Southern. The Baltimore & Ohio will form the section between Pittsburgh and Belington, the West Virginia Central & Pittsburgh between Belington and Caldwell, while the Chesapeake & Ohio, with branches now under construction, will complete it to Lynchburg, on the Southern system.

With the completion of the Greenbrier Valley Railroad, which will be during the coming year, the railroad map of the South will be decidedly changed. At present the traffic from Pittsburgh and vicinity must reach the Southeastern States in a roundabout direction, either by way of the Ohio river valley or through Pennsylvania and Maryland by way of Cumberland and Baltimore or Washington. The relations between Pittsburgh and the South are such that a short line is essential. The constantly-increasing use of Southern ore and pig-iron in Western Pennsylvania, as well as the extensive market for other Southern products, creates a very heavy northbound traffic annually, in addition to the business which manufacturers in the Pittsburgh district obtain in the South. The new road will also be utilized for the tourist business from this portion of the United States to the Southern winter resorts.

The Greenbrier branch, as already stated in the Manufacturers' Record, will reach a portion of West Virginia heavily timbered and containing a large area of coal deposits as yet undeveloped. Several companies have already been formed in anticipation of the building of this line, one of which, composed of capitalists from Buffalo, Rochester and other Northern cities, has already invested heavily in this territory and contemplates engaging in the lumber and mining business on an extensive scale. The new road will be the means of expanding such cities as Lynchburg and Danville, as it brings them into close relation with the eastern portion of West Virginia and gives them an opportunity to secure the trade of a large section of West Virginia which hitherto has gone to cities further north.

At the annual meeting of the Chesapeake & Ohio the stockholders ratified the decision to issue \$3,000,000 in bonds to construct the Greenbrier line. All contracts have been let, and a large force of men are now at work.

An Oklahoma Project.

In a letter to the Manufacturers' Record S. J. Scott of Tecumseh, Okla., writes that surveys have been made for the St. Louis, Tecumseh & Lexington Railroad. This line is to extend from Stroud Station, on the St. Louis & San Francisco system, to Lexington, a distance of seventy-two

and one-half miles. According to the engineer's report, the road can be constructed ready for the rails, etc., at a cost of \$6000 a mile, and the route is through a very fertile section of the territory. The line would connect with the Santa Fe system, also the Choctaw, Oklahoma & Gulf, in addition to the St. Louis & San Francisco system. Mr. Scott is president of the company.

BUILDING UP THE SOUTH.

Work Accomplished by the Railroads.

For years the Southern roads have been pursuing a policy calculated to develop the great natural wealth of the Southern States, coal, iron and timber especially, giving low freights and exceptionally good service, that anyone interested in mining or lumbering might cultivate any new market, seeing to it that wherever there was a furnace for smelting iron it should get its raw materials at a cost that would carry out the intentions of nature when she piled up the mineral wealth of Tennessee, Alabama and other States. Because of this policy the South has been able to make at a profit pig-iron at a cost which no other iron-making region of the world can approach, and, as developing is now reaching its secondary and tertiary stage, there will in the near future come from the South highly finished products of iron and steel at prices proportionably as much lower than the prices of other manufacturing centers as were the prices for pig-iron.

So, too, instead of shipping logs and lumber to other regions, the South will become headquarters for furniture-making, for car-building, etc. The action of the roads has not, however, been confined to coal, iron and lumber. The cotton mills have been equally well looked after, and so has every mill, mine, factory or industrial camp or plant, big or little, to the end that it should have a living chance, and, having this chance, it has lived, thrived, prospered, and its increased output is the basis of the big gain in the freight and passenger revenues of the Southern roads. The old way of throttling development by overcharges on freights, which was for so many years the real embargo on Southern development, gave way to a wiser and better policy ten years ago, and now the results are clearly apparent in great and general prosperity and in solvent conditions for the railroads and other corporations.—New York Daily Financial News.

FOR SEABOARD AIR LINE.

Pullman Cars to Cost Nearly \$250,000, also 50 Locomotives and 200 Freight Cars.

In a recent issue of the Manufacturers' Record it was announced that the Seaboard Air Line had ordered several trains for its New York and Florida service during the coming season. The following description of this rolling stock has been furnished the Manufacturers' Record by the Pullman Palace Car Co. The sleeping cars will be of the latest pattern, each containing twelve sections, with drawing and smoking rooms. They will be finished in St. Jago mahogany, with smoking and toilet rooms in tiger wood. The drawing-room will be lined in African walnut. The upholstery will be of blue Persian moquette in the body of the car, with green moquette in the drawing-room and red leather in the smoking-room. The cars will be lighted by gas, heated by steam and the water supply furnished by compressed air.

The trains will be at least four in number, made up of about six cars each. The cost of this rolling stock will be nearly \$250,000. The trains will run direct over

what is known as the Florida & West India Short Line from New York to Jacksonville and Tampa, and will be among the finest ever seen in the South.

The Manufacturers' Record is also officially informed that the Seaboard Air Line has decided to purchase fifty additional locomotives and 200 box cars to meet its requirements for business. The orders will include twenty-five freight engines, fifteen passenger and ten switch engines. This rolling stock alone will represent an outlay of fully \$600,000, exclusive of the Pullman equipment.

Capitalization of Railroads.

Supplemental to his statement before the United States Industrial Commission, President Stuyvesant Fish of the Illinois Central Railroad Co., discussing the assertion that the railways of the United States are over-capitalized, said that not only there was no water in the securities of the Illinois Central Railroad Co., but that their sum total did not represent by millions of dollars the cash actually spent on the property. He presented statements from the officials, statistical reports contrasting the railroad situation in the United States and Great Britain in 1890 and 1898. This showed that while the number of miles of railroad in the United States has increased 18.06 per cent. in nine years, their capitalization, both bonds and stocks, has increased only 14.64 per cent., and that the increase of capitalization per mile of railroad is \$3, less than one-half of one-hundredth of 1 per cent.; that the gross receipts of the railroads have increased 18.58 per cent., while the gross receipts per mile have increased \$30, or less than one-half of 1 per cent., while the country has been increasing at the rate of 1,250,000 persons per annum. On the other hand, in the United Kingdom the number of miles of railroad operated increased 7.9 per cent., the capital 26.41 per cent., the capital per mile operated 17.15 per cent., the gross receipts 20.39 per cent. and the gross receipts per mile operated 11.57 per cent. The capitalization, including stocks and bonds, of the railroads in the United States is \$60,343 per mile, and of those in Great Britain \$261,895 per mile.

United for Development.

"Tennessee, Its Resources and Possibilities," is the title of a pamphlet published by the Louisville & Nashville Railroad, the Nashville, Chattanooga & St. Louis Railway and the Southern Railway, which, with their main lines and branches, cover the entire State from east to west and north to south. Its objects are to impress upon all whom it may concern or interest the evidence that the resources of the State are appreciated, the importance of its development understood, and that co-operation on broad lines has been undertaken, and to present in convenient and condensed form such facts about the State as capitalists and homeseekers may desire to know. Mr. Robert Gates, industrial and immigration agent of the Louisville & Nashville; Col. J. B. Killebrew, industrial and immigration agent of the Nashville, Chattanooga & St. Louis, and Mr. M. V. Richards, industrial and immigration agent of the Southern, have contributed from their stock of practical knowledge to the descriptions, the facts and the figures in the work, which guarantees their correctness and value. Every effort has been made to present full information in condensed form, and any lack of information about particular localities is due to the failure of those most interested in it to supply it. Two exceedingly valuable features are "The Phosphate Deposits of Tennessee," by Col. J. B. Killebrew, which appeared originally in the Manufacturers' Record,

and "The Forests of Tennessee," by Geo. B. Sudworth, of the United States Department of Agriculture.

Work on the Tennessee Central.

The work now in progress on the Tennessee Central Railroad is of such magnitude that the question has arisen as to whether the Tennessee Central Railroad Co. is back of the enterprise or whether it really represents some larger corporation. The history of this enterprise has been detailed in previous numbers of the Manufacturers' Record. Jere Baxter, who has been instrumental in promoting it, projected a railroad to connect Nashville with Knoxville, running nearly east and west through the central and eastern part of the State. Owing to the topography of the country, the cost of constructing the line was estimated to be very heavy—on some portions as high as \$50,000 a mile—owing to the large amount of work to be done in the mountainous portions, as well as the tunnels and bridges. Although it was begun several years ago, and work has been stopped altogether a number of times since its inception, President Baxter apparently was not to be discouraged, and continued to push the project. He interested a St. Louis syndicate in the matter about two years ago, and as a result the Tennessee Central Railroad Co. was practically reorganized. Among those interested were several St. Louis bankers, while it was reported that the Niedringhaus brothers, who are large coal and ore property owners in Tennessee, were also backing the enterprise. A contract was let to resume work on the line about a year ago, and considerable progress has been made, as from 500 to 3000 men have been employed along various portions. Between the towns of Crossville and Monterey, a distance of sixty miles, the road has been graded and tracklaying is in progress.

The Tennessee Central, which will be 230 miles long when completed, would form a most valuable link in another system to the Atlantic coast, as at Knoxville it will connect with a line now being constructed, which, in turn, will connect with the Norfolk & Western system. At Nashville it will meet the Louisville & Nashville system. By the construction of thirty-five miles of road the Illinois Central can make a connection with the new line at Clarksville, Tenn. Its advantages to both systems are obvious, for it would allow them to reach the Atlantic coast at Hampton Roads by a traffic arrangement with the Norfolk & Western. Undoubtedly the reason for the present activity is not the local value of the line, although it passes through extensive beds of ore, phosphate, and timber lands, but because it is intended to be a part of a new system from the Northwest to the Southeast, for the outlay already represents over \$1,000,000, while the entire cost of the road ready for operation will not be less than \$5,000,000, owing, as already stated, to the difficulties in the way of building it.

Railroad Notes.

The Georgia & Alabama Railroad Co. has ordered 400 freight cars to be built as soon as possible at the company's shops at Americus, Ga.

G. T. Withers, who was formerly connected with the Louisiana & Northwest Railroad, has been appointed trainmaster of the St. Louis, Kennett & Southern Railroad Co.

The Tampa Electric Co. of Tampa, Fla., is the corporation which will succeed the Consumers' Electric Light & Railway Co. It has secured control of the property of the latter company, and has elected George J. Baldwin, presi-

dent; P. O. Knight, vice-president, and G. W. Bradley, general manager. The new company is capitalized at \$500,000.

A dispatch from Dallas, Texas, is to the effect that the St. Louis Southwestern Company has determined to reach Houston by means of the Houston, East & West Texas road, which connects with the Tyler Southeastern division of the St. Louis Southwestern system at Lufkin, Texas.

The October number of the Street Railway Journal is termed a souvenir edition in honor of the eighteenth annual convention of the American Street Railway Association at Chicago. It is one of the most elaborate numbers of a technical journal that has ever been published in this country. It is replete with superior half-tone engravings showing street-railroad construction, also various street-railway systems in different parts of the world, indicating the wide field now occupied by American contractors both for railways and rolling stock. The elaborate system of surface and elevated roads in Chicago is detailed at length, and altogether the number contains a very large amount of information of interest to the general public, as well as to its regular readers.

Westinghouse in Russia.

The contract of the Russian government with the Westinghouse Company, noted recently in the Manufacturers' Record, amounts to \$15,000,000. It involves the equipment of 300,000 freight cars, as well as a large number of locomotives. Sixty thousand cars are to be fitted with Westinghouse air-brakes, and the remaining 240,000 with air-pipes and couplings, inside of three years. The decree stipulates that 20 per cent. of the freight cars of a train shall be equipped with air-brakes, all of which will be capable of control by the locomotive engineer, as the air-pipes and couplings will be continuous throughout each train.

One of the stipulations made by the Russian government is for the manufacture of the air-brakes in Russia. For this purpose the Westinghouse Company has erected a fine plant at St. Petersburg, equipped with the latest improved American machinery, and is now employing a large force under expert American engineers. The general manager is Mr. A. Kapteyn of London, who is assisted by Mr. Walter Phillips of Philadelphia, and by American experts in charge of the various departments.

In order to meet the requirements of the Russian railways, the Westinghouse Company has decided to double the original size of its works in St. Petersburg. It is intended, as soon as the brakes can be manufactured, to supply them to all the freight cars on the imperial and private railroads, the present arrangement for 20 per cent. of each train being but preliminary to their universal application.

All of the tobacco sections, according to a bulletin of the United States Department of Agriculture, have displayed much concern in the leaf-tobacco exhibit for the Paris Exposition of 1900, which is now being prepared for shipment by the department. Virginia, North Carolina, Tennessee, Kentucky and Maryland contributed to the display of what is known as the manufactured and export types, such as are used for cigarettes, snuff, plug, chewing, pipe-smoking and export tobaccos. The cigar types are represented by samples from Texas, Connecticut, Florida, New York, Pennsylvania, Wisconsin and Ohio. The collection will include about 1000 samples, and will no doubt be the finest ever exhibited by the United States.

TEXTILES.

[A complete record of new textile enterprises in the South will be found in the Construction Department.]

Correspondence relating to textile matters, especially to the cotton-mill interests of the South, and items of news about new mills or enlargements, special contracts for goods, market conditions, etc., are invited by the Manufacturers' Record. We shall be glad to have such matter at all times, and also to have any general discussion relating to cotton matters.

COTTON-MILL ACTIVITY.

Ginning Cotton Free in Georgia.

Mr. Cuyler Smith, Atlanta, Ga., who is making a specialty of Southern investment securities, especially cotton-mill stocks and bonds, in a letter to the Manufacturers' Record, says:

"I am engaged in the cotton-mill industry in the Carolinas, Georgia and Alabama, selling their stocks and bonds and seeking the assistance of Northern and Southern capital for new mills or those desiring to enlarge. I am at present engaged in the building and promotion of half a dozen mills in this State. Our Georgia mills have been wonderfully successful during the past year, some having declared as high as 54 per cent. dividend on their capital stock, and the average running from 15 to 40 per cent. The activity in the construction of mills in Georgia is wonderful.

"Georgia cotton factories are establishing gins in connection with their mills. Their plan is to gin cotton free of charge, bale it at their own expense, return the bagging and the ties to the farmers, and pay for the cotton thus obtained at the market price, and frequently giving a sharp advance, say from one-half to one cent per pound, to attract cotton from the surrounding country. This is done in order to save in local freights, which are often quite heavy. The Whittier Cotton Mills in this county, situated on the Chattahoochee river, have made it a practice for several years of returning the bagging and the ties to the farmers after the cotton is consumed."

What the Round-Lap Is Doing.

[Mobile Register.]

The round-lap cotton bale marks a great advance in the packing and handling of cotton. There is no doubt that the cotton packed in this new manner presents itself more favorably to the eye and is actually in better condition than the cotton packed in the ordinary square bale. A multitude of opinions favorable to the new mode of packing are obtained by the company that has introduced the new method. Unquestionably some of these opinions are entitled to acceptance, especially those of foreign buyers, whose word goes far to fix the price that is paid for the crop.

While we are not prepared to pass an opinion upon the subject ourselves, and are inclined to give weight to some of the objections raised against the round-lap bale, we are sure that whatever there is of good in the method will make itself felt, either in the adoption of the round-lap or in the improvement in the method of packing the square bale. The time has passed when the old, slovenly way of delivering cotton can be tolerated. The presence of perfectly clean and absolutely intact cotton bales—those in the round-lap form—has taught a lesson that cannot be disregarded. The cotton world will demand from the practitioners of any method of packing an approximate perfection in the cotton bale. Already we observe efforts making to bring the square bale up to a better standard. Uniform

packing boxes are recommended by the cotton exchanges, and greater care in protecting the cotton is enjoined. This season, of course, there will be little complaint of the condition of the cotton, for the season has been an admirable one for picking, packing and shipping, but when we have a season of bad weather there will arise a great outcry if the cotton reaches the market in the bad condition of the olden time. And for this reform we must thank the round-lap people, even if we do not have cause in the course of time to credit them with wholly revolutionizing the business.

Cotton Movement.

The first two months of the present cotton season have been marked by many differences from the same period last year. The amount of cotton brought into sight has decreased from 3,248,491 bales to 2,852,169, or by 396,322 bales, while the total supply in sight has decreased from 3,516,057 to 3,471,067 bales, or by 44,990 bales. The exports have fallen from 1,420,844 bales to 1,242,898, a decrease of 177,946. The takings by Northern spinners have increased from 317,229 bales to 461,590 bales, or 144,361; by Southern spinners from 249,113 bales to 277,696 bales, or 28,583. The movement into sight during the first two months of 1898 represented 28.81 per cent. of the total crop. If the same ratio prevails this year the total crop will be about 9,900,000 bales. It is too soon, however, for such a calculation to be made upon this basis. The amount brought into sight in the sixty-four days of the season up to November 3 was 2,985,569 bales, a decrease of 550,579 bales. Exports were 1,327,593 bales, a decrease of 244,166. Takings by Northern spinners 502,369 bales, an increase of 141,155; by Southern spinners, 292,009 bales, an increase of 29,773 bales.

Manufacturing at Home.

It is expected that the local mills of Northern Georgia will spin all the cotton grown in that section this year. The Americus Times-Recorder is authority for the statement that persons who have investigated, and who are well qualified to judge, assert that the mills at Gadsden, Piedmont, Anniston, Rockmart, Lindale, Trion, Raccoon, Lafayette and Dalton will this year spin all the cotton raised north of these points to the Tennessee line. Here is one of the facts partly explaining the falling off of receipts of cotton at the ports, amounting to more than 600,000 bales since September 1. The Southern mills are using more freely than ever the cotton at their doors.

About \$40,000 for New Machinery.

The Newnan (Ga.) Cotton Mills has decided to expend about \$40,000 for enlargements and improvements, and the work has been commenced. Eighty-five feet is being added to the present mill, and 4000 new spindles will be installed, making the equipment 10,000 spindles. A standard cotton warehouse of 1300 bales capacity has been built also. The improvements are nearing completion. Contracts for all machinery and supplies have been awarded.

Moorhead's Proposed Mill.

The projected company at Moorhead, Miss., recently mentioned, has applied for charter as the Moorhead Cotton Mills, the capital stock being \$200,000. The incorporators are Messrs. C. H. Pond of Moorhead, Samuel Hale of New York city, B. L. Jones of Sunnyside, Miss., William K. Knox of New Orleans, La., and others. It is proposed to build a 5000-spindle factory, details of which are now being arranged.

They Want a Mill.

In a letter to the Manufacturers' Record Mayor Z. V. Peacock of Cochran, Ga., writes:

"The city council of this place has authorized me to offer to responsible parties interested in the erection of a cotton mill a locality for the necessary buildings, exemption from municipal taxes for ten years, free water for five years, and will guarantee to get subscriptions for \$15,000 of the stock."

A 5000-Spindle Mill.

Messrs. C. Smith, F. C. McAllister, C. L. Gross, John Wohner and others of Canton, Miss., have organized the Canton Cotton Mills, with capital stock of \$200,000, to build a 5000-spindle mill. The D. A. Tompkins Co. of Charlotte, N. C., will prepare plans and specifications and generally engineer the building of the plant. The product will be coarse sheetings.

Textile Notes.

The Grantville (Ga.) Hosiery Mills has increased its capacity on half-hose to 450 dozen pairs daily.

The Grantville (Ga.) Hosiery Mills has doubled its capacity, making the daily product now 600 dozen pairs of hose.

The Ulman, Magill & Jordan Woolen Co. of St. Louis, Mo., has been incorporated, with capital stock of \$30,000, by E. E. Magill, C. B. Ulman and A. E. Jordan.

The Norwood (N. C.) Manufacturing Co. has decided to install 2666 additional spindles and has contracted for the new machinery. The mill now has 5000 spindles in place.

Mr. C. S. Baines of Garrison, Texas, is endeavoring to organize a company for the establishment of a cotton and woolen mill. It is proposed to make the capital stock \$50,000.

Report states that Mr. A. B. Grace of Duncans, S. C., has purchased an option on the Van Patton shoals, in the Enoree river, intending to develop power and erect a cotton factory.

The Buffalo Manufacturing Co. of Stubbs, N. C., will double its equipment of 2000 spindles, contract for all machinery required having been awarded to the D. A. Tompkins Co. of Charlotte, N. C.

Mr. J. R. Shomaker, Cottondale, Fla., contemplates the establishment of a factory for the production of cotton rope. The necessary machinery for a factory of small size is wanted, excepting power.

A movement is on foot at Grantville, Ga., for the organization of a cotton-factory company. It is said that one firm has offered to subscribe \$50,000. It is probable that Mr. N. O. Banks will be interested.

The Roswell (Ga.) Manufacturing Co. has decided to expend \$45,000 for new machinery. Contract for the additional equipment has been awarded, but just what machinery has been ordered is not yet known.

Messrs. J. H. Pratt and A. E. Yeates of Atlanta, Ga., have leased the factory of the Anniston Bag Co., at Anniston, Ala. The factory is equipped for manufacturing cotton bags, and to this will be added machinery for making burlap bags.

Messrs. Edwin R. Lucas of Asheville, N. C., and W. E. Lucas of Laurens, S. C., will shortly assume charge of the Wall-halla (S. C.) Cotton Mills. An issuance of preferred stock amounting to \$50,000 and \$28,000 of common stock will be made, and enlargements will be made to the factory. It now has 3328 spindles and 200 looms.

The Knoxville (Tenn.) Knitting Mills were destroyed by fire last week, entailing a loss of about \$25,000. The company will erect a new building and resume operations, but meantime will lease and utilize a building containing 40 by 125 feet of floor space. Hereafter the machinery will be driven by electricity, for which a 25-horse-power motor will be used. Mr. George S. Andes of the company will make contracts.

The textile-mill company reported last week as projected at Rusk, Texas, has organized as the Rusk Cotton and Woolen Mills, the capital stock being \$15,000, and will apply for charter. Plans for building are being prepared. Directors have been elected as follows: Messrs. T. C. Nuby, J. W. Summers, Robert Pryor, J. F. Mallard, John T. Wiggins, I. K. Frazer, H. W. Pickett and B. C. Coupland. Mr. Nuby was made general manager.

The erection of a 5000 to 50,000-spindle cotton factory is proposed, and Mr. Simon Bear of 906 English-American Building, Atlanta, Ga., is the party to be addressed by interested people. The machinery for this mill is to include also a complement of looms for whatever number of spindles is purchased. Mr. Baer is now in a position to consider offerings of the machinery needed for the proposed enterprise, preference being given to equipment that is now or has been in an operating mill.

Labor Scarce in Southwest Virginia.

The scarcity of labor is an indication of the condition of business and manufacturing in Southwest Virginia. For some time past the demand has been so great in factories, mipes and furnaces for not only skilled, but unskilled labor, that farmers have given up the routine agricultural work, in some cases leaving the harvesting of their crops and the cultivation of their fields to the women of the family. In a letter to the Manufacturers' Record Messrs. Clark & Co., tobacco manufacturers, of Bedford City, Va., write as follows:

"In some sections this scarcity of labor was so great that it would have been impossible to have housed the tobacco crop had the season not been an unusually late one. As a large proportion of our needs are supplied by other markets than our home market, the delay in getting tobacco to market in no way affects us. Besides the dearth of farm labor, there is a scarcity everywhere else, and none of our industries here, including woolen mills, tobacco factories, etc., have all the labor they want."

Houses in Demand.

Morris Adler of Birmingham, Ala., reported last week as having, in connection with others, purchased the Bessemer Rolling Mill, writes that the only delay there will be in starting the mill promptly is the want of houses for the employees. The mill will employ about 450 hands, which, with their families, will add probably 1500 to 1800 to the population of Bessemer. But, as it is stated there is not a vacant house in Bessemer, there will be some difficulty in building houses rapidly enough to meet the needs. This will be done as quickly as possible.

Among the improvements in Northwest Georgia noted by the Rome Tribune are the building of a railroad from Cave Spring to Cedartown, with spurs at different points extending to iron-ore mines; the new Aragon Cotton Mills at Aragon, Ga.; additional mill buildings and hotel at Trion Factory; the building of a gold-smelting plant at Oakdale, and movements for cotton mills at three or four points in that section.

COTTONSEED OIL.

This department is open for the full and free discussion of trade topics and practical questions, and contributions are invited from men who are identified with this industry. Items of news are always acceptable.

The Market for Cottonseed Products.

New York, N. Y., November 7.

Owing to the declining character of the provision market earlier in the week, cotton-oil prices have been somewhat unsteady, but at this writing an improvement is in evidence with regard to the former. Concerning lard, it is certain that current price is too low when the price of the live animal is considered. It is therefore reasonable to assume that higher prices will prevail. Chicago lard, January delivery, is quoted at 5.27 cents. Tallow is unchanged on the recent decline. Concerning cotton oil, to quote an authority, while sales have been quite large, the actual market is below current quotations, the break in the hog and beef fat markets being in the main responsible. There is now an assurance from several quarters that there will be no scarcity of seed, the high prices bringing out supplies liberally. In view of the untoward conditions referred to, cotton oil is lower, although the demand is fairly good. The pressure to sell has also a tendency to weaken prices, but there is considerable oil under contract for delivery to speculators, the sale of which will net a fair profit to millmen regardless of the present shaky market conditions. The demand for cotton oil for compound lard and soap-making purposes, especially the latter, has shown a decline. The demand for export is, however, brisk, the chief difficulty being the scarcity of room. Concerning consumption of cotton oil abroad, it is reported that the importation of palm kernels into Germany has nearly ceased, and the trade of that country in palm oil has diminished by one-half. The largest and oldest firm there has ceased to exist, and those who remain cannot do a remunerative trade. The cause of this is attributed to the fact that Great Britain, which formerly received the principal export of Germany, has now its own factories. At the present time a petition signed by 160 German oil manufacturers is lying before the Bundesrath praying for an increase of import duty on cotton oil, which competes largely with palm oil. This, however, is unlikely to succeed, the opposite being the more probable result; that is, an increased consumption of cotton oil. Cotton oil in England of the home make has been marked up, and is well maintained on the advance, or at 17s. London and Hull. The following are closing prices at this market: Crude, tanks, 19 to 20 cents; crude here, barrels, 24 to 25 cents; summer yellow, prime, 26½ to 27 cents; off grades, 26½ to 27 cents; yellow, butter grades, 29 cents; white, 29 cents; winter yellow, 31 to 32 cents, and salad oil, 31 to 33 cents. Cake and meal is nominally quoted here at \$19 to \$20 per ton. Linseed-oil meal is selling at \$26 to \$27 per ton.

Cottonseed-Oil Notes.

The Louisville Cotton Oil Co. of Louisville, Ky., has increased its capital stock from \$50,000 to \$100,000.

Cottonseed is firm in North Alabama at \$10 per ton. In South Alabama and Georgia prices are steady at \$9 per ton.

Cottonseed products in Texas had an easier tendency last week, and values are lower. Prime crude oil, loose, 20 to 21 cents, and prime summer-yellow oil 23 to 24 cents; linters, per pound, 3 to 3¼ cents, all f. o. b. at interior points in the State. Cake and meal delivered at Galveston,

\$19 to \$19.50 per ton. Houston mills are paying \$10.50 to \$11.50 per ton for cottonseed f. o. b. interior points.

The following vessels cleared last week from Galveston, Texas, with part cargoes of cottonseed products: Steamship Willow Branch with 1825 barrels of cottonseed oil and 36,990 sacks of cottonseed meal for Rotterdam, and steamship Cuban for Liverpool with 2239 sacks of cottonseed meal.

A meeting of prominent cotton-oil-mill men from different sections of South Carolina was held at Greenville last week. The meeting was held privately, and nothing given to the press. It was stated, however, that the meeting was called on account of the change in prices of oil and the probability of a still further change. The question of establishing a central refinery was discussed, but no action was taken.

The directors of the American Cotton Oil Co. on Monday last declared a semi-annual dividend of 3 per cent. upon the preferred stock and a dividend of 4 per cent. upon the common stock, payable by Winslow, Lanier & Co. on December 1. After the payment of these dividends there will be something over \$200,000 to be added to the surplus account. The annual meeting of the stockholders will be held December 7.

Development Near Ocala.

[Special Cor. Manufacturers' Record.]

Ocala, Fla., November 6.

E. B. Whiddon has been awarded the contract to drain the lands of the Meadows Land & Improvement Co. at the Meadows P. O., twenty miles north of Ocala. The contract is to remove about 500,000 square yards of soil, and was let for \$50,000, it is understood. The company has several thousand acres of fertile lands adapted to growing sugar-cane. It has the most powerful and expensive pumping plant in the State.

It is reported that Eugene West will construct a railroad from Ellaville through Taylor county to the Gulf.

Malloy, West & Kelley, naval-stores operators at Summerfield, have sold their entire business to Capt. N. J. Hillman of Floral City, who will assume control after the present season expires. Messrs. Malloy and partners will seek another location.

Wade & McNair of Fairfield, naval-stores dealers, will put in twenty new "crops" this fall (a crop is 10,000 boxes). They now have in seventeen crops at their Fairfield farm. They own several other distilleries in different parts of the State.

Among the features of the November Chautauquan of Cleveland are: "Word Coinage" by Living American Authors," by Leon Mead; "School Children Who Govern Themselves," by Lucy A. Yendes; "Christianity and Socialism," by Dr. Washington Gladden; "Progress of Municipal Socialism Since 1893," by Prof. Richard T. Ely and Dr. Thomas K. Urdahl, and "The Inner Life of John G. Whittier," by Mrs. James T. Fields.

The October issue of The Situation, a paper published at Houston, Texas, in the interests of home industry, furnishes a unique, practical adaptation of the doctrine which it preaches in a home-made cover supplied by E. H. Cunningham of Sugarland, a member of the Houston Manufacturers' Association. It is made of bagasse, this product being used probably for the first time for printing purposes.

Atlanta and other Southern cities are now in long-distance telephone connection with New York.

PHOSPHATES.

Florida Phosphate Fields.

[Special Cor. Manufacturers' Record.]
Ocala, Fla., November 6.

J. B. Wilcot at Newberry is constructing a new plant on modern principles, with a 75-ton capacity per day. The plant has double log washers. The plant will employ from seventy-five to 100 men, and will be in operation about January 1.

J. W. Sanders has discovered valuable deposits of phosphate on 300 acres of land owned by him near Early Bird, this county (Marion), and will either mine the deposits himself or sell to the J. Buttgenbach Co. of Cordele, who would mine it. The company is looking over the lands. Mr. Sanders holds the land at figures far past the \$10,000 mark.

J. W. Pearson will shortly erect two new modern plants, with 30-foot double log washers each. The plants will employ fifty men each, and construction will begin about December 1. One of the plants will be constructed at Piedmont and the other at Cordele. Mr. Pearson has good deposits of phosphate at both places. He is also operating a plant very successfully at Hartshorn.

J. V. Burke is tearing down the old Crown and Crescent plant at Hartshorn, and will erect a first-class new plant in its place. The deposit was seen to be so good that a new plant was necessary to remove the rock.

The Laurent phosphate plant at Floral City is almost ready to begin mining.

A Mr. Lancaster, it is said, has leased the Todd mines, two miles north of Hernando, and will put same in operation in a short time.

Wm. Hocker has discovered some good deposits of phosphate on lands owned by him in Citrus county in the vicinity of Inverness.

Phosphate Markets.

Office Manufacturers' Record,
Baltimore, Md., November 9.

The local phosphate market has ruled firmer during the past week, in sympathy with the improvement in other fertilizer ingredients. There has been a better demand from out of town, and local manufacturers have been buying more freely. Advices from all sections of the Southern phosphate belt continue very encouraging to those engaged in the industry. Mining in Tennessee is very active, and at Mt. Pleasant, Centerville and other sections there is a most vigorous development in progress. New deposits rich in analysis are cropping up nearly every day, and the prices of desirable phosphate territory are advancing very materially. Prices of phosphate rock are generally steady at \$2.75 to \$3 for domestic and \$4 to \$4.50 for foreign. Miners in South Carolina are all very busy, and the prospects for a better season are quite encouraging. Prices continue steady, with crude rock selling at \$4 at mines and hot-air-dried \$4.50 f. o. b. vessel Ashley river. The market in Florida is firm, with a good foreign demand for phosphate rock, and everything is well sold up to March of next year. The shipment of phosphate rock from Florida ports is of fair volume. The shipments from Fernandina for the month of October aggregated 15,700 tons, which gives a total for the past ten months of 226,487 tons, which exceeds the total shipments for 1898 by about 39,000 tons.

Fertilizer Ingredients.

The market has ruled strong for all leading ammoniates, and in blood and tankage the demand has shown considerable improvement. Considerable interest is being taken in contracts from November forward, and the situation generally is

more satisfactory. Sulphate of ammonia is firm and higher. Nitrate of soda is steady, with a fair movement at primary points.

The following table represents the prices current at this date:

Sulphate of ammonia (gas)....	\$2 75 @ 2 80
Nitrate of soda.....	1 70 @ 1 72½
Blood.....	1 90 @ 1 92½
Hoof meal.....	1 67½ @ 1 70
Azotine (beef).....	1 90 @ 1 95
Azotine (pork).....	1 90 @ 1 95
Tankage (concentrated).....	1 67½ @ 1 70
Tankage (9 and 20).....	1 77½ & 10 @ 1 80 & 10
Tankage (7 and 30).....	1 70 @ 1 75
Fish (dry).....	20 00 @ —
Fish (acid).....	12 00 @ —

Phosphate and Fertilizer Notes.

The Nickerson Fertilizer Co. of Easton, Md., was sold last week to the American Agricultural Co. of New York. It is understood that the factory will still be kept in operation, and under the present management.

The steamer Cape Colonna cleared last week from Pensacola for Havre with 2513 tons of Tennessee phosphate rock. The total shipments of phosphate rock from Pensacola for the month of October aggregated 14,888 tons.

What is thought to be phosphate of a very high grade has been found near Holmansville, Tenn. It is said to resemble the Mt. Pleasant rock in appearance, and exists in immense quantities. Specimens have been sent to Nashville to be analyzed.

The schooner May Lee Patton cleared from Charleston last week with 800 tons of phosphate rock. The total shipments of phosphate to domestic ports from Charleston since September 1 amount to 21,862 tons, against 16,100 tons last year.

The following vessels cleared last week from Savannah with part cargoes of phosphate rock: Steamer Hiltarn for Manchester with 1224 tons; steamer Cassius for Revel with 1018 tons, and steamer Craigeam for Rotterdam with 2030 tons.

It is stated that H. N. Soria and others of New Orleans have purchased the T. K. Orr phosphate property of 305 acres, situated in Maury county, Tennessee, for \$75,000. The farm lies just south of Mt. Pleasant, and is supposed to contain 200 acres of phosphate.

Mr. Albert F. Dewey reports the shipments of phosphate rock from Punta Gorda for October as follows: Steamship Kong Hakon for King's Lynn with 3020 tons; steamer City of Gloucester for Bristol with 3148 tons; barkentine Doris with 1206 tons, and steamship Florida with 1037 tons, both for Baltimore; total, 8411 tons; previously reported, 64,531 tons, or a grand total for ten months of 72,942 tons, of which 27,909 tons were domestic and 45,033 tons foreign. The above shipments were made by the Peace River Phosphate Mining Co.

The phosphate shipments from the port of Fernandina, Fla., for the month of October amounted to 15,700 tons, and for the ten months ending October 31 the shipments aggregated 226,487 tons. This exceeds the total shipments for 1898 by about 39,000 tons. The estimated shipments for November are placed at 15,000 tons. The following companies have charters for the present month: Dunnellon Phosphate Co., steamer Thomas Melville; P. B. & B. S. Bradley, steamers Bendo and Roehampton, and J. Carstens, steamers Finland and Pacific.

The total amount of Walker county (Alabama) coal transported on the Mississippi river by the barges of the Southern Railway Co. from Greenville to the sugar plantations of Louisiana and Mississippi during the year ended September 30 was 75,262 tons, nearly three times as much as that transported in 1898. There is talk of doubling the capacity of the barge line.

LUMBER.

[A complete record of new mills and building operations in the South will be found in the Construction Department.]

LUMBER MARKET REVIEWS.**Baltimore.**

Office Manufacturers' Record,
Baltimore, Md., November 9.

A fair volume of business has been recorded during the past week in nearly all lines of the local lumber industry. The demand is generally good from all the usual sources, and prices obtained show a very steady market. In North Carolina pine receipts are moderate, and sales of kiln-dried lumber have been larger than usual. Manufacturers are in some cases getting even higher prices than those listed by the association. Mills at all sections of the North Carolina pine belt are busy on orders, and stocks show no accumulation. Air-dried lumber has been selling well, and boxmakers and yardmen have been good buyers during the week. There is a fair business in white pine, while prices continue very firm, with stocks about ample for the demand. Cypress is steady as to value, with a moderate trade reported. In the hardwood market the demand is good, and orders are in some cases hard to fill, owing to the scarcity of dry stock. The demand comes principally from furniture manufacturers, wagon shops and other wood-working concerns at nearby towns, the local demand being lighter during the week. Exporters report business fair, but owing to extreme ocean freight rates business is somewhat restricted.

Charleston.

[From our own Correspondent.]

Charleston, S. C., November 6.

In all departments of the lumber market business continues to show an increased volume, and the demand for lumber and other wood products is brisk. At all milling sections adjacent to this port everything is booming, and mills have all the orders they can attend to. A number of vessels are loading here, and others due to arrive. As a rule, quick dispatch in loading lumber vessels at this port is adhered to by those in the trade, and is an inducement to owners to offer low rates of freight. An example of fast loading was given last week by the J. R. Stokes Lumber Co., when the schooner William M. Bird took on 600,000 feet of lumber in six days. The owners of the vessel allowed fourteen days for loading, and by the promptness in taking on cargo saved eight days. At Georgetown there is an extraordinary movement in lumber circles. The Atlantic Coast Lumber Co. continues its active operations in building, and its saw-mill is getting out lumber for its own use, while in the near future the foundations will be laid for its immense quadruple band saw-mill. W. H. Tilghman, an extensive lumber manufacturer, has lately moved to Georgetown from Norfolk, and is pushing rapidly the construction of his saw-mill plant. The Tilghman Lumber Co. expects to have its mill in operation by January 1, and will saw pine lumber exclusively. The shipments of lumber from Charleston last week is reported as follows: Steamship Alliance for Kingston, Jamaica, with 150,000 feet of lumber and 500,000 shingles; steamship Theresa Herman for Hamburg with five cars of poplar logs, twenty-two cars of oak and poplar lumber and five cars of barrel staves. The Boston steamers cleared with 76,493 feet of lumber and New York shipments aggregated 600,000 feet of lumber. The offering of desirable vessels is light, and freight rates are firm and unchanged.

The total shipments of lumber to coastwise ports from September 1 to November 3, inclusive, amounted to 9,340,518 feet, against 3,647,083 feet for the same period last year. The foreign shipments since September 1 amount to 1,150,000 feet.

Jacksonville.

[From our own Correspondent.]

Jacksonville, Fla., November 6:

The lumber trade of this port during the month of October was quite active, and the volume of business showed considerable expansion as compared with previous months. The situation here in all avenues of the lumber industry is more satisfactory, and everything in labor circles, both here and at adjacent points, is working smoothly. There is a good demand for all desirable grades of lumber, and orders from all Northern and Eastern markets are coming in quite freely. The shipments for the month of October amounted to 9,770,004 feet, of which 8,458,750 feet were coastwise and 1,311,254 were foreign. The shipments for September amounted to 8,994,480 feet coastwise and foreign. The shipments of cross-ties for October amounted to 6000, and of shingles 2,660,300. The movement in all wood products thus far during November indicates larger shipments, and a number of vessels are expected to arrive to load during the month. The Clyde Line steamers go out with their full complement of lumber each trip. The following charters were reported last week: Schooner Thomas Winsmore, 381 tons, from Jacksonville to Philadelphia with lumber at \$7 and free wharfage, 40,000 a day; schooner Aetna, 373 tons, from Jacksonville to New York with lumber at \$7.75.

Mobile.

[From our own Correspondent.]

Mobile, Ala., November 6.

The volume of trade in the local lumber and timber market continues to show greater expansion as compared with the same period last year. The demand for lumber is very decided at the moment, with prices firm at list figures. The stocks at all mills, both here and at sections adjoining this city, are all very light, and there is no accumulation in any direction. The demand comes mostly from Central and South America, Mexico and the West Indies. Weekly shipments to Cuba continue, and from that section a good trade will be revived. Timber is firm at the recent advance. Hewn timber is quoted at 14 to 15 cents per cubic foot, and sawn timber at 14 to 14½ cents per cubic foot. Hewn poplar is in fair demand at 12 cents per cubic foot. Shipments of lumber during the past week aggregated 1,129,527 feet, and for the season 12,617,777 feet, against 4,977,734 feet for the same period last year. The offering of desirable tonnage is light, and freights are firm. The Norwegian bark Lancashire, 1111 tons, was relet to load here for Buenos Ayres with lumber at \$12.50 prompt. At Pensacola everything in the lumber and timber industry is very active since the settlement of the labor troubles. The local timber market continues firm, quotations ranging from 15 to 15½ cents, 4000 pieces of Choctawhat-chie stock being sold during the past week for 15½ cents. Shipments of lumber and timber of all kinds for the week were over 6,000,000 feet, and for the month of October over 18,000,000 feet left the port of Pensacola.

Lumber Notes.

C. C. Heisen of Chicago has purchased 48,000 acres of timber lands in Madison county, and will erect saw-mill and otherwise develop the property.

The Southwestern Lumber Co. of Mobile, Tyler county, Texas, has been char-

tered, with a capital stock of \$100,000. The incorporators are W. E. Trott, B. A. Trott and D. R. Swift.

A charter was granted last week to the Iron Mountain Lumber Co. of Carter county, Tennessee, with a capital stock of \$50,000. The incorporators are C. F. Currier, John W. Tipton and others.

The dry-kiln of the H. A. Batchelor Cypress Lumber Co. at Panasoffee, Fla., with its entire contents, was destroyed by fire last week. The loss is estimated at \$8000 to \$10,000, with a partial insurance.

The Valley Lumber Co. of Shelby county, Tennessee, was chartered last week. The capital stock is \$3000. The incorporators are J. N. Falls, S. V. Hofer, John Ellet, L. D. Falls and Ray Denscomb.

The Union Lumber Co. of Exit, Va., near Suffolk, has been incorporated, with a capital stock of \$3000 to \$5000. C. L. Barham of Newport News is named as president, and D. C. Lyon of Exit, secretary-treasurer.

Mr. S. H. Wilson has sold his milling plant and timber land holdings, situated on the Southern Pacific Railroad, about nine miles west of Orange, Texas, to C. A. Russell, who will take charge of the property at once.

The Lock-Moore and the L. B. Menefee lumber companies and the John P. Poe shingle mill at Lake Charles, La., were obliged to shut down on the 31st ult. on account of the extreme salty condition of the water in the lake and river.

The shipments of lumber from the port of Fernandina, Fla., for the month of October aggregated 11,212,515 feet, of which 294,560 feet were foreign and 10,917,925 feet domestic. This is the largest month's shipment for the current year.

The shipments of wood products from the port of Jacksonville, Fla., for the month of October are reported as follows: Lumber 9,770,004 feet, of which 8,458,750 feet were coastwise and 1,311,254 feet foreign; shingles 2,660,300, and cross-ties 6000.

The L. F. Miller Lumber & Shingle Co. of Orange, Texas, shipped last week twelve cars of blue-gum lumber to Europe via Galveston. The shipment aggregated 125,000 feet, among which was some very wide boards, for which fancy prices are expected.

The Joseph Brown Milling Co., six miles north of Malvern, Ark., including 21,000 acres of timber land, has been sold to J. H. Hamlin & Sons of Little Rock and others for \$90,000. A new company under the name of the Gifford Lumber Co. will be chartered and will operate an extensive lumber plant at Gifford.

The saw-mill plant of Frank Ford, three miles west of Helena, Ark., was destroyed by fire on the 31st ult. The mill had been leased to W. W. Roach, formerly of Union City, Tenn., who had large contracts for sawing poplar lumber for McDonald Bros. of La Grange. The loss is estimated at \$5000, with no insurance.

A notice has been sent out by General Freight Agent Davis of the Cotton Belt Railroad announcing that, effective December 1, there will be an advance in rates on yellow-pine lumber from mills in Missouri, Arkansas, Louisiana, Texas and Indian Territory to points in Kansas and Nebraska. There will also be some changes made in the hardwood lumber rates.

Messrs. McQuaig & Beacham of Orlando, Fla., have just closed a sale of 126,000 acres of timber lands in Lake county, Florida. Of this amount, 32,000 acres were sold to Hammond & Swindle, a Georgia turpentine concern, and 94,000

acres to Duke & Sons of Durham. It is said that the purchasers will at once develop the properties for lumber and naval-store purposes.

A Michigan furniture company is negotiating for the purchase of A. Knabb & Co.'s 10,000-acre timber lease of the Manor lands in Garrett county. The deal will include the establishment at Krug of a furniture factory employing several hundred hands. The narrow-gauge railroad will be sold with the timber lease, but the firm will still continue the cooperage business, and will reserve all the timber suitable for that purpose.

At Apalachicola, Fla., the lumber and timber trade is again quite active since the settlement of the strike. The Cypress Lumber Co. commenced operations again on the 31st ult. This company is now operating a blind, sash and door factory. The mills of the Apalachicola Lumber Co. and the Kimball Lumber Co. are running on full time. Pine timber is now selling at \$9.50 to \$10 per thousand feet, and logmen are rushing it to market while prices are up.

The announcement of the adjustment of the labor troubles at Pensacola, Fla., has caused a boom in the shipment of lumber for export, and the Louisville & Nashville Railroad has been obliged to put on four additional freight trains. Last week lumber for export arrived at the rate of 100 carloads a day, with indications that the rush will continue for some time. Forty vessels were in port on the 30th ult. for cargoes, and the largest fleet ever known in the history of Pensacola is now bound for that port.

The regular monthly meeting of the Gulf Coast Lumbermen was held in Mobile on the 1st inst., with J. W. Black, chairman, and W. C. Kilduff, secretary. Since the last meeting nine firms have signed the constitution, making sixteen in all. The following is the list up to the 1st inst: The Robinson Land & Lumber Co., Chicora, Miss.; Sullivan Timber Co., Mobile; M. L. Davis, Oak Grove, Ala.; Southern States Lumber Co., Pensacola; Bay City Lumber Co., Mobile; Moss Point Lumber Co., Moss Point; Baird Lumber Co., Mobile; Brent Lumber Co., Pensacola; Wagar Lumber Co., Wagar, Ala.; Vinegar Bend Lumber Co., Vinegar Bend, Ala.; J. E. North Lumber Co., Bond, Miss.; J. R. Nevers & Co., Saucier, Miss.; Ten-Mile Lumber Co., Perkinston, Miss.; Hand Lumber Co., Dolive, Ala.; Dantzer Lumber Co., Moss Point; W. B. Wright Co., Pensacola. Full and complete reports were received from a number of the members of the association for the month ending October 15, the summary showing a highly satisfactory condition of the market. The opinion among those in attendance at the meeting was that the mills of the Gulf coast have enough orders to keep them running through next February. Secretary Kilduff has collected some valuable information, the millmen co-operating with him in his efforts to make the bureau of information a success. The meeting adjourned until the first Wednesday in December.

A map of the Warrior coal basin by Mr. Henry McCally, assistant State geologist of Alabama, has just been published. It shows lines of outcrops of all the principal coal seams of the Warrior basin, and the country underlain by each seam, and is a valuable contribution to the development of that section.

The Chamber of Commerce of Pensacola, Fla., has elected W. A. Blount, president.

The rice millers of Southwest Louisiana and of Texas have formed an association.

MECHANICAL.

Raymond Roller Mill.

The Albert Raymond roller mill crushes and grinds the material by gravity and centrifugal forces. The steel spider se-

which is reduced to the required fineness by the roller passing over it once is instantly carried away by the air. That which is not fine enough drops down, is caught by the next plow following and carried between the succeeding roller tire running on the ring die to receive like

tion, the shafts carrying them must be pushed both upward and inward in the journal boxes, which have an inclination of about forty-five degrees. The force required to raise the weight of the rollers up this inclination and overcome the centrifugal force is all exerted on the material. The rollers do not bound and pound out the tires and ring die, as when pendulum suspended, a valuable feature possessed by no other mill, and one that largely increases the grinding capacity.

The rollers are caused to rotate on their axis by frictional contact with the ring die or the material under treatment, and the same journal boxes admit of a free bodily movement of the rolls while passing over any obstruction, thus avoiding all toggles and joints which are usually necessary in a mill using a pendulum-suspended roll.

In many roller mills the scrapers, or agitators, are attached directly to the rollers, and which are usually the fastest running part of the mill. In this mill the casting that supports the plows, or scrapers, is attached to the slow-speed upright shaft, and but little power is required to raise the material and throw it between the crushing surfaces of the roller tire and ring die. The plows can be removed or adjusted by simply removing one of the doors, and without taking the whole machine apart. The construction of the mill permits the faces of the roller tire to remain always parallel with the face of the ring die—a very important feature, and one that no other mill possesses.

The entire running part of the mill is low within the base casting. The base casting is very heavy, and has a large surface to rest upon the foundation. Therefore, the mill is very easy to install, and does not require any special foundation.

The waste-oil receptacle J and oil-retainer O form a complete housing for the roller journals. The waste oil escapes through the hole at the bottom, where J seats on scraper casting M. This opening also admits fresh air to the interior of J, and should there be any opening between J and O the partial vacuum in the mill, produced by the exhaust fan, will cause the air to rush out from the interior of J, thereby preventing any dust entering the roller journals.

Our illustration shows the roller shaft

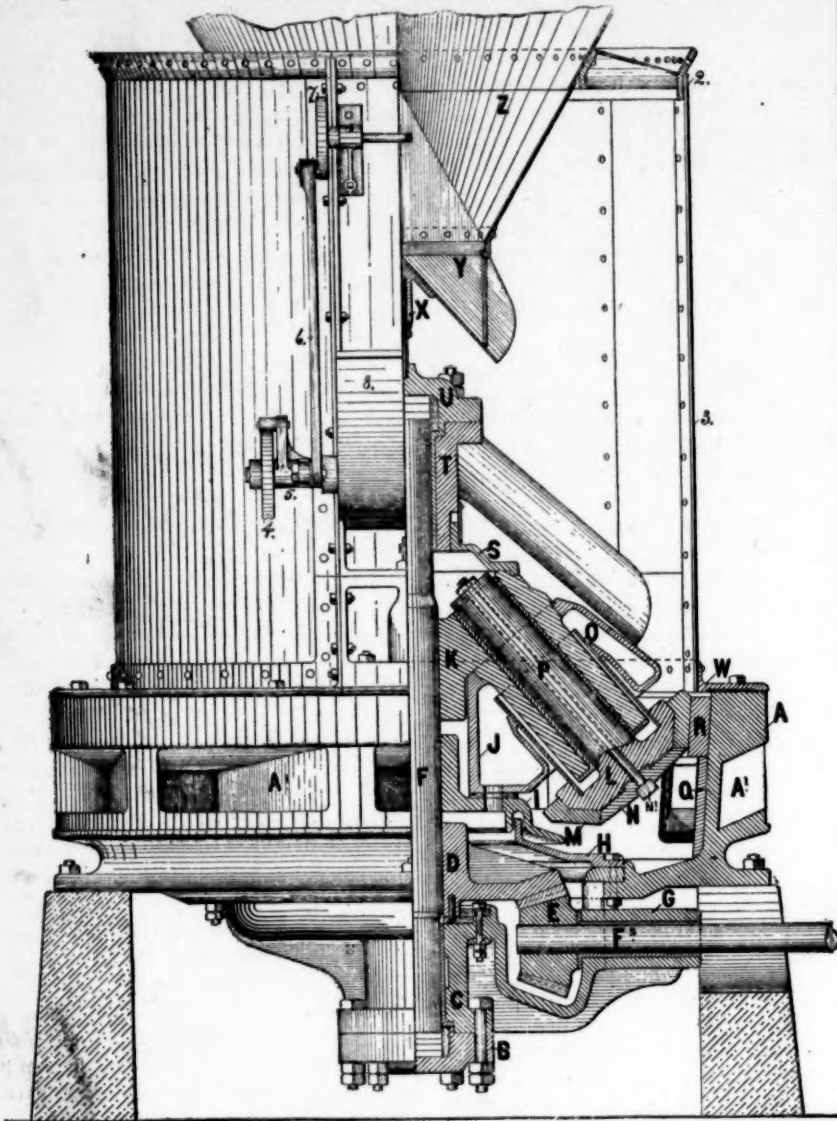
This mill receives the material from an ordinarily fine crusher and reduces it to any required fineness. If desirable, the mill can be constructed to run with a belt instead of the gear.

If in any case an impalpable powder is required, such result is guaranteed with the vacuum separator attached.

The Raymond Bros. Impact Pulverizer Co. of Chicago builds this machine.

New Double-End Tenoning Machine.

The H. B. Smith Machine Co. of Smithville, N. J., claims to have originated this class of machinery; it exhibited a double-end tenoning machine at the Philadelphia Centennial Exposition, and at that time it was considered a great novelty. Improvements have been constantly made and various sizes designed for various purposes, in many cases special machines being built. A highly perfected machine was exhibited at the World's Fair in Chicago. The machine illustrated is one of the latest products. It is of medium size, the working parts corresponding with the company's new No. 2 single-end tenoner, and is therefore particularly well adapted for sash, door and blind work or other work of this character. The machine is designed to carry double heads that will work tenons as long as six and one-half inches; it works as short as four and five-eighths inches and as long as fifty-nine inches between the shoulders, as wide as fifteen inches and as thick as four and one-half inches; there are three rates of feed, varying from ten to twenty-five feet a minute. The movable headstock is operated by a crank, located near the scale, and adjusts like the carriage of an engine lathe through gearing and a rack on the bed. There are independent screws for adjusting the heads for thickness of tenon, so arranged that the thickness of tenon can be changed without changing the face, or the face can be changed without any change in thickness of tenon, with no complicated machinery or back-lash of gears to contend with. The cut-off saws, at each end, are preferably placed in front, and have all needed adjustments. The bars over the work are adjustable in all directions, and are provided with double springs; that is, the shoes have springs and the bars themselves have springs where fastened to the brackets.

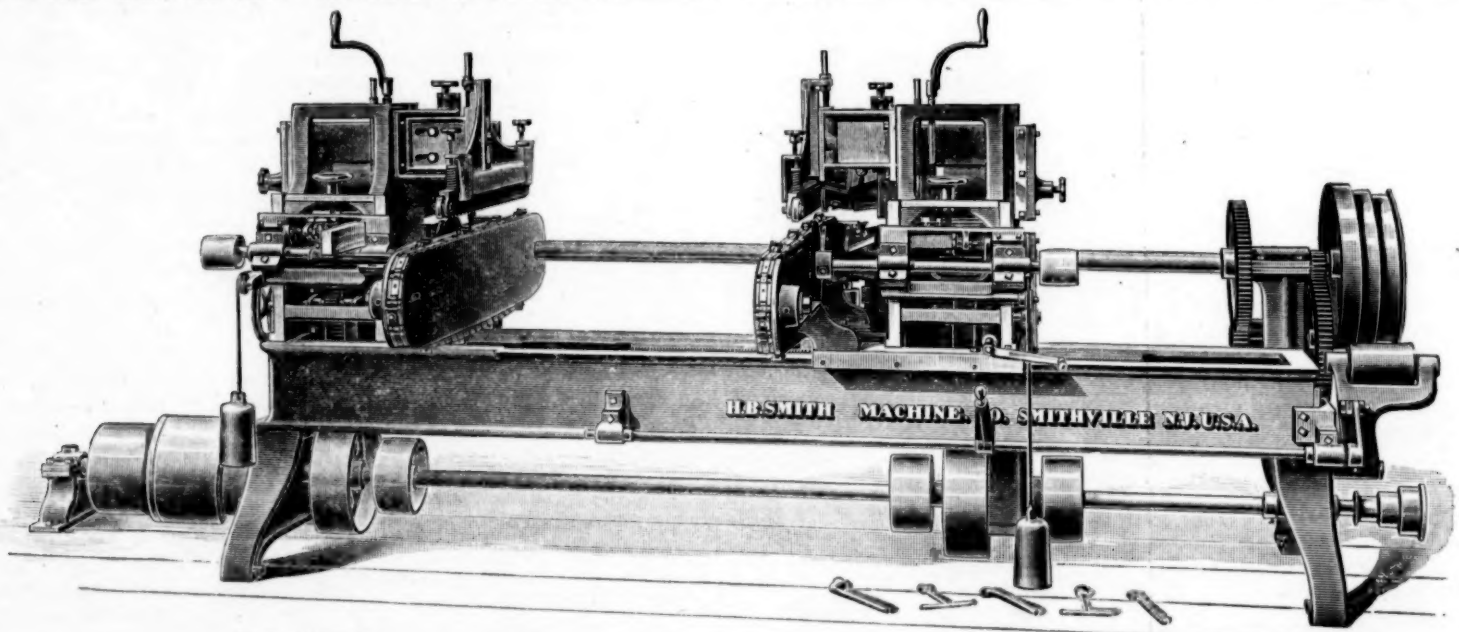


RAYMOND ROLLER MILL.

cured to the upright shaft has journal boxes inclining downward to receive the shaft of each roller. Hence, it will be seen that when the upright shaft is set in motion the rollers are carried around bodily within the ring die. A plow is located ahead of each roller, and con-

treatment. If the mill is kept properly filled with material the plows will throw a continuous stream between the two grinding surfaces, so that they are always in contact with a mass of material, and never with each other.

The journal boxes of the roller shafts



NEW DOUBLE-END TENONING MACHINE.

stantly throws a stream of the material between the faces of the roller tire and the ring die.

The air enters the pulverizing chamber through a number of openings around the mill, directly under the ring die and rollers, and that portion of the material

having a downward and outward inclination, cause the rollers to rest against the ring die by their own gravity, and as soon as set in motion the centrifugal force increases this pressure. It will be seen that, as the rollers pass over the larger pieces of material or any other obstruc-

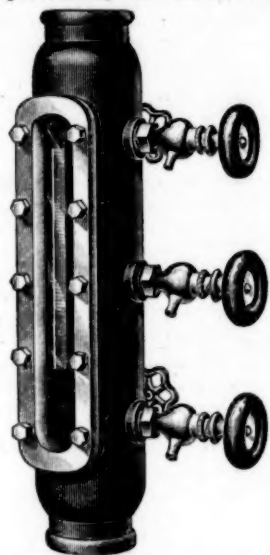
and roll center L, with oil-retainer O attached. The shaft P and roll center L are in one piece. M is the roller tire, or wearing part, which is very easily renewed. N shows the clamping plate for holding roller tire in position: N 1 clamping bolt for same.

These brackets are fastened to the stands direct, and not to the headstocks, so the varying pressure does not affect the thickness of the tenon as it would otherwise. The copes are fastened in a substantial manner to the sliding parts of the headstocks, and thus adjust with them; be-

sides this, they have independent adjustment in all directions. The great secret of accuracy in the operation of these machines is in the proper construction of the chain. The shaft driving the chains is of large diameter, so as to make them run smoothly. Many of the links are provided with micrometer screws for adjusting the angle knees to square them with the heads of the machine. The pulleys are all of good size, and the machine has ample weight and power for the purposes for which it was intended.

Improved Water Gauge.

No successful manager can ignore improvements. Devices that appear on the market from time to time for the improvement of any service in the mechanical world are subject to the scrutiny of owners and operators to whom such devices may be of value. Reliable water gauges are one of the necessities, the improved construction of which is in demand by those on the alert to better their equipment. In this connection it is desired to call attention to the water gauge and column manufactured by the Ranz-Lambrecht Stamping Tool & Manufacturing Co. of Sixth and Spruce streets, St. Louis, Mo. The illustration shows the device mentioned. The gauge cases are made of solid metal, well finished and nickel-plated; the glass is the finest Scotch tempered article, one-half inch thick, securely held in position by lid and steel screws,



IMPROVED WATER GAUGE.

and the finished gauge has been tested to 3000 pounds of pressure to the square inch, causing not the slightest change and lasting for an indefinite time. The column (lately completed), is already in strong demand, as it does away with rigging for gauges and has many features easily observed by any engineer and boilermaker. The column is of the finest gray casting, sufficiently strong for any pressure. Gauge chamber within column, inlet to same controlled by valves, permitting of insertion of new glass under pressure should by accident the glass be destroyed. The column is fitted with the usual compression cocks, and is highly finished. Many advantages of this improved device over round-tube water glasses are claimed by the maker. For more technical description, prices and other information address the manufacturer.

Fuel-Saving Grates.

P. J. Conroy of Philadelphia exhibits at the Export Exposition, now in progress in that city, some samples of his patent rocking and dumping grates. It is claimed for this grate that it saves from 15 to 20 per cent. of fuel, while it has other important advantages. The rocking and dumping surfaces are adaptable to furnaces of any size or shape, and may be used for horizontal and locomotive boilers and other purposes. Mr. Conroy

also has on exhibition some iron and brass specialties, such as refrigerator-door fasteners, locks and hinges.

Charlotte Office of Crocker-Wheeler Co.

In a recent issue was presented what purported to be an illustration of the Charlotte (N. C.) office of the Crocker-Wheeler Co. of Newark, N. J. The illustration was instead a representation of the extensive works of the Crocker-Wheeler Co. at Ampere, N. J. This company is manufacturer and electrical engineer generally, and by the establishment of its Charlotte office expects to obtain a large share of the rapidly-growing electrical trade in the South.

Abrasive or Grinding Materials.

The almost universal custom of applying the term "emery" to all abrasive substances is an illustration of how easily accuracy of language is subordinated to habit.

When artificial grinding wheels, composed of grains of emery held together by various binding substances, first came into use, their superiority over grindstones was so marked that the term "emery wheel," instead of being specifically applied to wheels made of emery, became to be generally applied to all abrasive wheels other than the old-style grindstones.

Abrasive wheels are made of sand, glass, corundum, particles of steel, carborundum, emery and many other substances, so that the artisan has at his command a variety of substances for grinding purposes. Among comparatively recent improvements in the abrasive field is carborundum. It is a manufactured product, sometimes, though erroneously, called "artificial diamond."

Carborundum is a crystalline compound of carbon and silicon, formed in an electric furnace at a temperature probably not much less than that of the sun. It contains the two elements in equal atomic proportions, and, by weight, thirty parts carbon to seventy parts silicon. Its chemical name is carbide of silicon, the formula being SiC .

Carborundum is infusible at the highest attainable temperature, and is insoluble in any of the ordinary solvents. It approaches very nearly the diamond in hardness, and its greater friability makes it difficult to absolutely determine which of the two is the harder. But carborundum is successfully used for cutting and polishing diamonds, so the difference must be in its favor.

Being exceedingly sharp and brittle, small particles in a wheel composed of it sometimes break away, thus presenting fresh cutting surfaces. However, this breaking away is not attended with any undue wear of the wheel itself.

The specific gravity of carborundum is 3.123.

The essential advantages of it consist in its infusibility and insolubility; in its hardness, which renders it durable; its sharpness, which makes it a fast-cutting substance, and its lightness, which makes it easy to handle and safe in wheel operations. The sharpness of carborundum makes it a cutting rather than a grinding material, and the result of this is frequently seen in the smooth finish of the work done.

In 1891 carborundum was a laboratory product, and was sold by the carat to diamond polishers. In 1893 its production was 250 pounds per day, and it was sold by the ounce to lens and valve grinders. In 1899 its production is 125 tons per month, and it is sold by the carload.

The works of the Carborundum Company at Niagara Falls, N. Y., possesses great scientific interest, carrying on operations which are absolutely unique from the

standpoint of the electrician, the chemist and the mechanical engineer.

Electrical Operation of Rubber Works.

Some of the most prominent manufacturing establishments have now in use electrical power for operation of their plants. The latest house reported as having installed electrical equipment is that of the B. F. Goodrich Co., the well-known rubber manufacturers of Akron, Ohio. This industry is situated in the heart of a coal district, and that it should substitute electricity in place of steam drive is somewhat of a novelty, and evidently electricity is preferred for other reasons than those of mere economy in the consumption of fuel.

The Westinghouse Electric & Manufacturing Co. will supply the entire electrical equipment, under the direction of E. C. Shaw, electrical engineer to the Goodrich Company, with whom many of the ideas embodied in the plant are original.

Engine and boiler houses will be of steel, the former 130x80 feet, with coal bunkers overhead having a capacity of 800 tons. Boilers will aggregate 3000 horsepower, and be equipped with mechanical stokers and coal conveyors.

The engine-room will measure 124x50 feet, and contain three compound condensing high-speed Corliss-type engines, direct-connected to three Westinghouse two-phase generators, two of which will be of 500 kilowatt and one 150 kilowatt, the generators being arranged to work in multiple. This central power station will supply electric lighting for the buildings and furnish power to about sixty Westinghouse type "C" induction motors scattered over the works. An elaborate switchboard will provide for the multiple running of the generators and control the circuits for lighting and power. Each power circuit will be furnished with a two-phase Westinghouse integrating wattmeter to register the exact amount of power used by each department, and the engineer in charge will be able to read the total amount of power supplied.

About sixty motors will be installed, varying from 300 horse-power to one horse-power, with an aggregate capacity of 2000 horse-power. Some will be attached directly to individual machines, such as tube mills, calender rolls, elevators, etc., each machine having its separate motor. The lighter machines will be connected by belts to shafting, and a single motor will drive a group of them. The type of motor used affords great advantage for factory work, as it is virtually automatic, requiring nothing but an oil supply once in three months; an unskilled attendant can operate them, and having no commutator or brushes, there is no sparking or danger from fire, even when working among inflammable or explosive materials. The motors can be bolted to beams or stood upon a platform or placed in any position where they occupy no valuable space.

The primary object in this departure by the Goodrich Company is to secure the economy in operation which an electrical drive affords. Sixteen separate steam engines will be supplanted, and the power plant concentrated under one roof. In an immense factory like the Goodrich it is costly to operate separate steam engines, the loss by condensation and leakage of steam pipes being a serious item. Under the new system electricity will be carried by feed wires to all parts of the works and converted into mechanical power by electric motors. Experience in many industries is claimed to have shown that the electrical drive economizes three-fourths of the power required for operating steam engines. Another signal advantage of electrical operation is its flexibility as to

extensions, which can be effected by simply adding further generating units and the necessary additional wire feeders.

TRADE LITERATURE.

Kerosene Engine.—The use of engines for motive-power other than the regulation steam engine is one of the developments of recent years in the industrial world. The gas engine has entered the arena in competition with other motive-powers and its progress has been extensively noted. The fact that the gas engine must necessarily be limited to the field of the gashouse area has prompted the introduction of a kerosene engine by Mr. August Mletz of 128 Mott street, New York city. This engine, known as the Mletz & Weiss, was placed on the market with a view of introducing a safe, simple and reliable prime mover, and its field has been a constantly increasing one. The catalogue relative to the gas and kerosene engines of August Mletz presents illustrations of the devices in their application to various branches, where they have been in constant operation for years with remarkable economy and durability. Abundant proofs are offered of the satisfactory results these engines effect. Send for catalogue.

Prominent Southern Architect.—The time has passed when large sums of money are expended on buildings without considering progressive ideas of construction or pleasing effects in architecture. One of the greatest points to be considered in contemplating the erection of new buildings is the scientific and practical manipulation of all raw materials entering into these structures. The activity that has been prevailing in the industrial life of the South during recent years has been followed in a proper ratio by the construction of many buildings in all classes, business-houses, residences, temples, churches, etc. One of the South's most prominent architects, and whose theoretic and practical knowledge has entered into many important Southern buildings, is Mr. Frank M. Milburn of Charlotte, N. C. Mr. Milburn has issued a catalogue containing a few suggestions to the building public and a number of illustrations of buildings which have been executed in his offices. Those contemplating the construction of buildings of any kind are solicited to confer with Mr. Milburn in his professional capacity.

Textile-manufacturers' Directory.—One of the leading industries is the manufacture of textile goods. The giant strides that the South is making in the progress of its textile-manufacturing interests, and is destined to make in the future, is now a twice-told tale. This activity is adding new spindles and looms to the quota of the milling world at a rapid rate. A handy reference book, containing a list of textile mills, not only South, but North, East and West, is that issued by the Textile Manufacturers' Directory of 401 Broadway, New York city. This directory gives a complete list of the mills of the United States and Canada, with changes and corrections up to the latest date, gives the exact number of spindles and looms, knitters or other machines in each plant, names of officers, location, etc. Largely increased space (over former editions) is devoted to statistical information, markets, products, new mills, combinations, important statistics of permanent value, government figures, export facts and other valuable information of interest to all who are concerned in textile manufacturing. The book is well printed and bound, and offered for sale at \$4 per copy.

Graphite Paints.—It is well known to engineers that metal coatings lose character and become ineffectual by both physical and chemical means, and the perfect coating must meet the full requirements both ways. A reasonably hard and elastic substance, with some body to it, would seem to be the first requisite for a coating to resist changes of a mechanical nature, such as the wearing of the elements, cracking in heat or cold, etc., while a very inert substance would be less liable to chemical change. During the last few years the use of paints has been greatly improved because of more thought being given to the subject. Graphite paints have earned a prominent place in the users' consideration and their fabrication has been given the attention of experienced men. One of the most prominent manufacturers of graphite paints is the Detroit Graphite Manufacturing Co. of Detroit, Mich. This company has combined graphite with proper materials, discovered from extensive experiments to be the best, and offers its line of goods, which have already a large and increasing consumption. The company has lately issued a book of interest in connection with its goods. Every present or prospective user of paints can have a copy on request.

CONSTRUCTION DEPARTMENT.

THE MANUFACTURERS' RECORD seeks to verify every item reported in its Construction Department by a full investigation and complete correspondence with everyone interested. But it is often impossible to do this before the item must be printed, or else lose its value as news. In such cases the statements are always made as "rumored" or "reported," and not as positive items of news. If our readers will note these points they will see the necessity of the discrimination, and they will avoid accepting as a certainty matters that we explicitly state are "reports" or "rumors" only. We are always glad to have our attention called to any errors that may occur.

* Means machinery, proposals or supplies are wanted, particulars of which will be found under head of "Machinery Wanted."

In correspondence relating to matters reported in this paper, it will be of advantage to all concerned if it is stated that the information was gained from the Manufacturers' Record.

It often occurs that the organization of a new company in a town is not known by the postmaster, and hence letters addressed to the company are returned marked "not known." The Manufacturers' Record reports the first organization of all companies, and our readers, in seeking to get into communication with them, should be very careful in deciding how to address them, and it is often advisable to add the names of one or more incorporators as an aid to the postmaster in delivering mail.

ALABAMA.

Anniston—Bag Factory.—J. H. Pratt and A. E. Yeates of Atlanta, Ga., have leased the Anniston Bag Co.'s factory; they will put in new machinery (for making burlap bags) and put in operation the factory.

Birmingham—Gas-retort Works.—The Birmingham Gas Retort Manufacturing Co. has been incorporated, with capital stock of \$50,000, for the manufacture of fluid-burner firelogs, stoves, ranges, etc.; incorporators, Caldwell Bradshaw, Fred Sloss and Thos. J. Bradshaw of Birmingham and Geo. W. White of Chattanooga, Tenn.

Birmingham—Hardware Factory.—The Birmingham Hardware Manufacturing Co. will rebuild its plant reported last week as burned.

Birmingham—Iron Mines.—The Iron City Mining Co., lately organized, is proceeding to open its mines, is erecting an ore washer and has one already built; J. W. McQueen, secretary.

Center Star—Shingle Mill.—Jos. A. Nichols of Florence, Ala., will build a shingle mill of 40,000 daily capacity near Center Star.

Evergreen—Cotton Mill.—C. P. Deming, A. F. Belo, E. J. Hart, P. C. Walker, C. S. Rabb and F. J. Dean compose a committee to solicit subscriptions to the capital of a proposed cotton-mill company.

Gadsden—Machine Shops.—John R. Proctor will rebuild his burned machine shops.

Huntsville—Oil Mill.—T. W. Pratt and J. Coons will build a cottonseed-oil mill.

Huntsville—Sewing-machine Works.—The Chamber of Commerce has a proposition from New England parties for the establishment of a sewing-machine factory.

Huntsville—Confectionery Factory, etc.—The Chamber of Commerce has completed arrangements for the establishment of a factory by Kaiser & Barrion of Virginia to produce architectural ornaments, etc.; also arranged for the establishment of a steam dyeing and cleaning plant and for a confectionery manufactory; it is said that \$100,000 will be invested.

Huntsville—Brick Works.—J. J. and W. L. Jones and Robert Dyas, proprietors of the Huntsville brick plant, recently reported as having purchased fifteen acres of land in North Huntsville and to erect large steam brick plant, to have patent steam dryhouses,

etc., have incorporated the Huntsville Brick Co., with a capital stock of \$9000; when both plants are in operation the capacity will be about 75,000 bricks per day; contract for machinery has been awarded.

Jasper—Shingle Factory.—E. J. Chandler will establish a shingle factory; machinery purchased.

Jenifer—Iron Furnace.—A report credits the sale of the Jenifer furnace to W. E. Weller of Gadsden, Ala., at \$175,000; its capacity is eighty tons, and probably this will be increased.

Mobile—Basket Factory.—W. T. Rufer of Sherwood, Ohio, is completing arrangements for the removal of his basket factory to Mobile, recently reported as in contemplation, to have capacity of 2500 dozen daily.

Montgomery—Lime Plants.—Sperry, Jones & Co. of Baltimore, Md., and associates have secured control of practically all of the lime-producing plants in the Southern States south of Virginia, except Texas, including forty-one plants, which have an annual capacity of 2,500,000 barrels; it is proposed to consolidate the plants into one company and management as the Consolidated Lime Co. under New Jersey laws, with capital stock of \$2,500,000. A. M. Baldwin of Montgomery, Ala., will be president. Offices of the company will be at Montgomery, Ala., and Nashville, Tenn.

Opelika—Sewerage System.—The city will issue bonds for construction of sewerage system. Address "The Mayor."

Thomas—Iron Furnaces.—The Republic Iron & Steel Co. telegraphs the Manufacturers' Record from Birmingham that it has plans now ready for one iron furnace 18x35 feet (250 tons daily capacity), to be followed later by another of the same size; it is probable that the construction of the first furnace will be commenced at once; company's main office, Chicago.

ARKANSAS.

Arkadelphia—Electric Plant, Water Works, etc.—The city council will be petitioned for authority to lay off the city in improvement districts for water, electric lights and sewerage. Address Mayor J. C. Calloway.

Clarendon—Hoop Company.—The Clarendon Hoop Co. has been incorporated, with capital stock of \$9000, by M. J. Manning, president; J. P. Lee, vice-president; R. J. Torrey, secretary, and F. M. Kennedy, general manager.

Gifford—Lumber Plant.—J. H. Hamlin & Sons of Little Rock and others have purchased for \$90,000 the Jos. Brown milling property at Gifford, including 21,000 acres of timber land, and will organize the Gifford Lumber Co. to operate.

Montrose—Lumber Company.—The Union Lumber Co. has been incorporated, with capital stock of \$25,000, by Milton Letzenhelsler, president; Percy E. Langreaver, vice-president, and Jacob Leidner, treasurer.

Paragould—Mining.—The Meiser Mining Co. has been incorporated, with a capital stock of \$10,000, by Eli Meiser, president; W. H. Jones, vice-president, and J. D. Block, secretary-treasurer.

Pine Bluff—Electric-light Plant.—M. Roberts and John Georgian of Independence, Mo., will erect electric-lighting plant in Pine Bluff.

Pocahontas—Creamery and Cold-storage Company.—The Pocahontas Creamery & Cold-Storage Co. has been incorporated, with a capital stock of \$10,000 and B. F. Bigger, president.

Rison—Shingle and Lumber Company.—The Saline River Shingle & Lumber Co. has been incorporated, with a capital stock of \$15,000, by W. A. Amls (president), Nathaniel Barnett and S. O. Barnett.

Sevier County—Lead and Zinc Mines.—J. H. Paschal of Little Rock and others have taken a 10-year lease on mines in Sevier county; will develop same to the utmost.

St. Joe—Mining, Smelting, etc.—The Excelsior Zinc Mining, Milling & Smelting Co. has been incorporated, with capital stock of \$500,000, to develop zinc mines, mill and smelter ores, etc. John B. Jones, Little Rock, Ark.; Chas. S. Ward, Morristown, N. J.; Rudolph Schaeck, Albert R. Kampf, New York city, and William A. Gilchrist, Alpena, Mich., are the incorporators.

FLORIDA.

Braidentown—Ice Factory.—J. E. Ender and O. W. Taylor will build a 10 or 15-ton ice factory.

Cottondale—Cotton-rope Mill.—J. R. Shoemaker contemplates establishing a cotton-rope factory.*

Deland—Sugar Mill.—Scott Hodgkins is erecting a steam sugar mill.

Early Bird—Phosphate Lands.—J. W. Sanders has discovered phosphate deposits on 300 acres of land near Early Bird and will either mine or sell to the J. Buttgenbach Co. of Cordele, Fla.

Early Bird—Phosphate Plant.—James W. Sanders contemplates the erection of another phosphate plant.

Hartshorn—Phosphate Plant.—J. V. Burke will erect another phosphate plant.

Inverness—Phosphate Mines.—Wm. Hocker has discovered phosphate on his lands near Inverness.

Jacksonville—Turpentine-still Plant.—McMillan Bros. of Savannah, Ga., have purchased building lots at Jacksonville for the purpose of establishing a plant to manufacture copper turpentine stills.

Jacksonville—Acid Chamber.—A large plant for treating phosphate rock for fertilizer in an immense acid chamber will be established at Jacksonville. Names of interested parties will be announced later.

Lake County—Timber Lands.—Duke & Sons of Durham, N. C., have purchased 94,000 acres of timber lands in Lake county and will probably develop.

Meadows—Land Cultivation.—The Meadows Land & Improvement Co. has let contract to E. B. Whiddon at about \$50,000 to remove 500,000 square yards of earth preparatory to cultivating the lands in sugar.

Meyers—Ice Factory.—It is rumored that A. A. Gardner contemplates erecting ice factory.

Miakka—Rice Mill, etc.—J. J. Cromby has purchased and will remove to Miakka a sugar mill; will also install rice-cleaning machinery, corn mill, shingle factory, etc.

Newberry—Phosphate Plant.—J. B. Wilcox is erecting phosphate plant of seventy-five tons daily capacity.

Pensacola—Wharf and Warehouses.—The Louisville & Nashville Railroad Co. will construct new wharf and warehouses; wharf will be 108 feet wide by 1227 feet long, of which 104x1202 feet will be under roof; warehouses will be two stories, 50x1202 feet; J. G. Metcalfe, general manager, Louisville, Ky.

Piedmont—Phosphate Plants.—J. W. Pearson will erect two new plants, with 30-foot double log washers.

Tallahassee—Electric-light Plant.—The city council has determined upon the erection of an electric-light plant. Address "The Mayor."

GEORGIA.

Atlanta—Soap Factory.—Andrew De Lissier of Kingston, Jamaica, will establish in Atlanta a soap factory to cost about \$100,000. Mr. De Lissier can be addressed temporarily care of "The Aragon," Atlanta.

Atlanta—Cotton Mill.—The establishment of a cotton mill of 5000 to 50,000 spindles, with complement of looms, is proposed. Simon Baer of 906 English-American Building can give information.*

Blue Ridge—Gold Mines.—The St. Louis Gold Mining Co., Capt. F. C. Baird, superintendent, will install the latest-improved mining machinery preparatory to developing its gold mines on an extensive scale.

Carrollton—Electric-light Plant.—The Mandeville Cotton Mills will install an electric-lighting plant.*

Cedartown—Cotton-oil Mill.—J. A. Wynn of Rome, Ga., has made a proposition to establish a cottonseed-oil mill in Cedartown.

Dahlonega—Gold Mines.—It is stated that the Dahlonega Consolidated Gold Mining Co. has sold 8000 acres of gold-bearing lands to English capitalists.

Dalton—Tent Factory, etc.—M. D. Smith will increase his capital and enlarge tent, awning, pants, etc., factory; eighty new machines will be installed.

Donaldsonville—Lumber Mills.—The Chattahoochee Lumber Co. has been incorporated, with capital stock of \$100,000, by W. T. Williams, W. L. Powell, J. J. Cummings and John E. Donaldson, to operate lumber mills, etc.

Grantville—Gold Mining.—The Cross Gold Mine Co. is reported as to erect a stamping machine.

Grantville—Cotton Mill.—A movement is on foot for the organization of a cotton-mill

company; possibly N. O. Banks can give information.

Grantville—Knitting Mill.—The Grantville Hosiery Mills has doubled its capacity to 450 dozen pairs of hose daily.

Jonesboro—Electric-light Plant.—A. B. Rivers has been mentioned in connection with reported electric-light plant.

Newnan—Cotton Mill.—The Newnan Cotton Mills (recently reported) is adding eighty-eight feet to its mill and will increase from 6000 to 10,000 spindles; warehouse, with capacity of about 1300 bales of cotton, has just been completed; cost of improvements \$40,000; entire equipment has already been purchased.

Roswell—Cotton Mill.—The Roswell Manufacturing Co. has awarded contract for \$45,000 worth of new machinery; present equipment seventy-six cards, 120 looms and 12,600 spindles.

Savannah—Drug Company.—Incorporated: The Solomons Company, capital stock \$200,000, to deal in drugs, chemicals, etc.; J. M. Solomons and Isalah Solomons, incorporators.

KENTUCKY.

Louisville—Cotton-oil Mill.—The Louisville Cotton Oil Co. has increased its capital stock from \$50,000 to \$100,000.

Louisville—Tobacco Factory.—Clark & Loomis have prepared plans for a 120x160 addition for the Spirit-Cured Tobacco Co.

Louisville—Cold-storage Plant.—The Louisville Ice Co. has taken permit to erect a three-story, \$9000 building for its proposed cold-storage plant.

Nicholasville—Lumber Company.—The Roy & Soper Co. has been incorporated, with capital stock of \$15,000, by G. A. Roy of Madison county and O. T. Soper of Jessamine county.

LOUISIANA.

Bastrop—Electric Light and Water Works.—The city has awarded contract to R. M. Adams at \$9000 for the construction of electric-light plant and water works.

Madison County—Saw Mills, etc.—C. C. Helsen of Chicago has purchased 48,000 acres of timber lands in Madison county; will erect saw mill and otherwise develop the property.

Madison Parish.—C. C. Helsen of 356 Dearborn street, Chicago, who lately bought 48,000 acres of timber lands in Madison parish, has resold the lands to the Chicago Export Lumber Co., which will erect mills for cutting the timber.

Ponchatoula—Ice Factory, Sugar Mill, etc.—A stock company, with capital of \$40,000, is organizing for the erection of a central sugar mill, ice factory and box factory. Geo. H. Biegel, secretary, can be addressed for information.*

MARYLAND.

Annapolis—Ice Factory.—The Annapolis Ice Manufacturing Co. will install a 20-ton machine.

Baltimore—Brewery.—The Monumental Brewing Co. has been incorporated by Arnold E. Hillegast (president), Frank B. Cahn, Charles B. Hoblitzell and others, with a capital stock of \$150,000; the company has acquired the property of the Monarch Brewing Co. and contemplates the erection of a brewery to have a capacity of 100,000 barrels per year; plans for the completion of the buildings are being prepared by Otto Wolf of Philadelphia and call for a fireproof structure of brick, stone and iron, 125x500 feet.

Baltimore—Drug Factory.—The Emerson Drug Co. has let contract to E. M. Noel for the erection of its new factory building, to be 44x170 feet, six stories high, electric lighting, boiler and engines, etc.

Baltimore—Manufacturing.—John M. Keeler, Charles Osse, J. H. Preston, Alex. Hardcastle, F. D. Wynn and T. H. Embert have incorporated the Charles Osse Manufacturing Co. to manufacture a mechanical coating invention; capital stock \$100,000.

Elkton—Paper Mills.—The Southern Pulp Co. & Elk Paper Co. is repairing its machinery in the Singlerly Mills, as referred to last week. Operations are expected to be resumed soon; Geo. B. Kerfoot, superintendent.

Hancock—Mineral-oil Development.—The Graham Oil Co. has been organized to develop for mineral oil in Washington county. Address company, care of Geo. W. Skinner, Hagerstown, Md.

Krug—Furniture Factory, etc.—A Michigan furniture company is negotiating for the

purchase of 10,000 acres of timber lease, intending to utilize same in a furniture factory to be built. A. Knabb & Co. own the property.

MISSISSIPPI.

Canton—Cotton Mill.—The Canton Cotton Mills has been organized, with capital stock of \$200,000, by John Wohner, C. L. Gorss, J. Lutz, F. C. McAllister and others, and will build a 5000-spindle mill.

Greenville—Coal Chute.—The Southern Railway Co. will enlarge its coal chute at Greenville and increase the capacity of the barge line; L. Green, division freight agent, Birmingham, Ala.

Grout Springs—Incorporated: The Grout Springs Co., capital stock \$25,000, by J. T. Grout, W. H. Hardy, J. J. Newman and others.

Holly Springs—Cotton-oil Mill.—B. S. Hall and others contemplate erecting a cottonseed-oil mill as recently reported.

Jackson—Ice Factory.—The Banner Ginnery Co. is considering the installation of a 10-ton ice factory.

Laurel—Saw Mill.—The Laurel Lumber Co. will erect another saw mill.

Meridian—Lumber Company.—The Capital Lumber Co., capital stock \$25,000, has been incorporated by J. H. Culpepper, E. A. Spinks, M. C. Conant and G. M. Spinks.

Moorhead—Cotton Mill.—The Moorhead Cotton Mills, capital stock \$200,000, has been incorporated to build a mill and install 5000 spindles; the incorporators are C. H. Pond, J. M. Lawrence and M. N. Pittman of Moorhead, Samuel Hale of New York city and others. C. H. Pond can be addressed.

Natchez—Cotton Compress.—The Natchez Cotton Compress Co. will rebuild its compress damaged by explosion.

Tupelo—Electric-light Plant.—J. W. Hoyle is mentioned in connection with a report that \$7000 water works will be built.

Vicksburg—Incorporated: The Julius M. Klein Company, capital stock \$5000, by Julius M. Klein and J. K. Gibbs.

MISSOURI.

Carthage—Lead and Zinc Mines.—Chartered: The Wheel of Fortune Lead & Zinc Mining Co., with a capital stock of \$24,000, by W. Patten, W. McMillan, E. N. Beach and others.

Dudley—Saw-mills.—Jos. J. Gehlhausen will rebuild his hickory mills recently reported burned; capacity 20,000 feet.

Joplin—Lead and Zinc Mines.—The Philadelphia Zinc & Lead Mining Co. has been incorporated, with capital stock of \$3,000,000, for the development of 6075 acres of lead and zinc lands in the Joplin district; Charles D. Cramp, president; R. M. Hunter, vice-president; Edwin Shapley, secretary-treasurer, all of Philadelphia, Pa. Edwin Shapley can be addressed.

Joplin—Lead and Zinc Mines.—Chartered: The Magnolia Lead & Zinc Co., capital stock \$200,000, by W. H. Wells, J. F. Carman, J. H. Ripley and others.

Kansas City—Lead and Zinc Mines.—The Combination Zinc Mining Co. has been incorporated to conduct a general mining and smelting business, capital stock \$50,000, by A. F. Nathan, O. S. Bowman, H. A. Willson and others.

Kansas City—Mining.—The Forty-eight Mining Co. has been incorporated, with capital stock of \$2500, by A. T. Palmer, James Rayner, Robert Murphy and others.

Kansas City—Zinc Mining.—The Juggernaut Zinc Mining Co. has been chartered, with capital stock of \$60,000, by F. A. Hornbeck, J. N. Bruner, O. E. Haight and others.

Kansas City—Coffee, etc.—The Georgia Coffee & Spice Co. has been incorporated, with capital stock of \$12,000, by G. M. Gordon and others.

Kansas City—Mining.—The Gln Hollow Mining Co. has been incorporated, with capital stock of \$100,000, by William Huttig, W. E. Swenzel and others.

St. Louis—Manufacturing.—The Templeton Manufacturing Co. has been incorporated, with capital stock of \$50,000, by W. G. Templeton and others.

St. Louis—Manufacturing.—Incorporated: The Reardon Manufacturing Co., capital stock \$75,000, by Jas. A. Reardon, Nicholas Frick and others.

St. Louis—Woolen Company.—Incorporated: The Ulman, Magill & Jordan Woolen Co., capital stock \$30,000, by E. A. Magill and others.

St. Louis—Odorizer Company.—The Automatic Odorizer Co. has been incorporated, with a capital stock of \$5000, by Charles G. Ette, John W. Musick and others.

NORTH CAROLINA.

Charlotte—Woodworking Factory.—J. H. Wearn & Co. will erect a planing mill and sash, door and blind factory; contracted for machinery already.

Charlotte—Clothing Factory.—Chartered: The Charlotte Clothing Manufacturing Co., with a capital stock of \$40,000, by J. C. Burroughs, M. P. Pegram and others.

Charlotte—Planing Mill.—J. H. Wearn & Co. have purchased the Star Mills property and will improve and operate same; also will erect a large planing mill.

Durham—Trunk Factory.—J. B. Harris (Box 477) contemplates establishing a trunk factory.

Graham County—Saw-mills, etc.—S. M. McEwen of Jefferson, N. C., has purchased 11,000 acres of timber lands in Swain and Graham counties and will erect saw-mills to cut said timber.

Greensboro—Water Works.—It is said that surveys have been commenced for the proposed water works, for the construction of which \$100,000 was voted recently. Address "The Mayor."

Newton—Water-power.—It is stated that T. H. Vanderford has negotiated the sale of Lookout shoals, on the Catawba river, to prominent State cotton-mill operators, who intend to develop the property, erect cotton factory, etc.

Norwood—Cotton Mill.—The Norwood Manufacturing Co. will install 2666 additional spindles, giving it 7666 in all.

Salisbury—Table Factory.—C. S. Burgess of Salisbury and W. D. Burgess of High Point will establish a lounge and table factory.

Salisbury—Water Works, etc.—It has been decided by popular vote to issue \$100,000 of bonds (reported last week) for public improvements, including the construction of water works. Address S. F. Ford, mayor.

Statesville—Tobacco Factory.—Mr. Sullivan (of Lincoln county) will manufacture tobacco in Statesville. Address care of L. Ash.

Stubbs—Cotton Mill.—The Buffalo Manufacturing Co. has awarded contract for doubling the capacity of its mill; present equipment 2000 spindles.

Wadesboro—Electric-light and Water Works.—The city has engaged Henry E. Knox, Jr., to prepare plans and specifications for its proposed electric-light plant and water works; \$25,000 was voted recently for the plants. Address "The Mayor."

Winston—Tobacco Factory.—The R. J. Reynolds Tobacco Co. is to build a brick house for new drying and reordering machinery.

SOUTH CAROLINA.

Abbeville—Ice Factory.—J. Allen Smith is reported as to be interested in a proposed ice-factory company.

Anderson—Underwear Factory.—The Anderson Drawers Manufacturing Co. has been organized by D. P. Sloan and H. C. Townsend, and will start factory of twenty-five dozen capacity daily.

Columbia—Mercantile.—Incorporated: The Heath Grocery Co., capital stock \$25,000, by M. C. Heath and associates.

Orangeburg—Live-stock.—Chartered: The Dukes Live-Stock Co. by A. L. Dukes and others; capital stock \$5000.

Smyrna—Gold Mine.—F. D. Horn will develop gold mine on his property.

South Carolina—Cotton Mill and Water-power Development.—It is reported that A. B. Grace of Duncans, S. C., has secured an option on the Van Patton shoals property on the Enoree river with a view to developing the water-power and erecting a cotton mill.

Walhalla—Cotton Mill.—Edwin R. Lucas of Asheville, N. C., and W. E. Lucas of Laurens, S. C., will shortly assume charge of the Walhalla Cotton Mills; new stock, amounting to \$78,000, will be issued and enlargements made to the mill.

TENNESSEE.

Carter County—Lumber Company.—C. F. Carrier, John W. Tipton, L. F. Miller, J. D. Jenkins and John H. Tipton have incorporated the Iron Mountain Lumber Co., with capital stock of \$50,000.

Charlotte—Improvement Company.—The Cumberland Valley Improvement Co. has been incorporated, with a capital stock of \$10,000, by W. A. Bell, W. L. Cook, S. E. Hunt and others.

Chattanooga—Boiler Works.—Walsh & Weldner have awarded contract for a large addition to their boiler works.

Chattanooga—Sole-pipe Works.—The Chattanooga Pipe & Foundry Co., recently re-

ported as incorporated with \$50,000 capital, has elected Chas. Relf, president; J. F. Casey, vice-president, and M. M. Hedges, treasurer-manager; company will build at once a plant for the production of soil pipe, capacity to be twenty-five to fifty tons daily.

Chattanooga—Stove Foundry.—The Chattanooga Stove Co. will erect an additional two-story building and put in new machinery at cost of \$5000, thus increasing capacity more than double.

Chattanooga—Coal Mines.—The Sale Creek Coal Co. has commenced mining new coal veins on Sale creek; it is said that iron mines will be opened also; Sol Simpson, president.

Harriman—Iron Furnace.—It is proposed to organize a company for the erection of a blast furnace; possibly the Harriman Land Co. can give information.

Holmansville—Phosphate Deposits.—Reports are current that phosphate rock has been located on the lands of E. W. Williams and Irving Gardner.

Jackson—Land Company.—Chartered: The Jackson Land Co., capital 2000, by L. T. Brooks and others.

Knoxville—Clothing Factory.—The Union Manufacturing Co. has been incorporated, with capital stock of \$25,000, by J. G. Kincaid, John Bowman, N. T. Little, M. S. Little, Robert Ross and S. C. Custer. Company will establish clothing factory of fifty machines at 309 Gay street.

Knoxville—Laundry-blue Factory.—The Cowan-McCargo Co., incorporated last week, will manufacture laundry blue and other similar specialties. Will soon buy machinery; R. W. McCargo, manager.

Knoxville—Brewery.—It is stated that K. R. Sternberg, president of the Lion Brewing Co. of Baltimore, Md., contemplates forming company to build a large brewery in Knoxville.

Knoxville—Packing Company.—The East Tennessee Packing Co. has increased its capital stock to \$25,000.

Knoxville—Knitting Mill.—The Knoxville Knitting Mills will establish its plant in a building containing 40x125 feet of floor space while its new building (to replace burned plant) is being erected; electrical-power will be used, and a 25-horse-power motor is to be installed. Address Geo. S. Andes of the company.

Knoxville—Chair Factory.—Plans are maturing for the establishment of a chair factory; for particulars address Chas. Cramer.

Lynville—Iron-ore Mines.—John Fitzpatrick has sold seventy-five acres of iron-ore lands to Northern parties, who will probably develop.

Maury County—Phosphate Mines, etc.—The American Phosphate Co., H. D. Huhm, general manager, Rooms 1, 2 and 3 Jackson Building, Mt. Pleasant, Tenn., has purchased more phosphate lands in Maury county; is now erecting a large phosphate plant which will cost \$75,000.

Memphis—Pump Works.—C. W. Metcalf, recently reported as having purchased the Millington Pump Works, has, with J. H. Malone, S. M. Neely, S. J. Shepherd and J. Shanks, incorporated the Millington Pump Co., with a capital stock of \$30,000.

Memphis—Lumber Company.—The Valley Lumber Co. has been incorporated, with a capital stock of \$3000, to deal in lumber, etc., by J. N. Fall, S. V. Hofer, J. Ellett and others.

Memphis—Bridge.—The county contemplates the erection of an iron bridge at Hindman Ferry. Address "The County Clerk."

Mount Pleasant—Phosphate Mines.—H. N. Soria and others of New Orleans have purchased for \$60,000 the J. K. Orr phosphate property at Mount Pleasant and will develop.

Nashville—Lumber Company.—The Valley Lumber Co. of Shelby county has been incorporated by J. N. Falls, S. V. Hofer, John Ellett, L. D. Falls and Ray Denscomb, with capital of \$3000.

Nashville—Gas Plant.—The Nashville Gas Co. has been incorporated by Thomas H. Malone, B. F. Wilson, Joseph H. Thompson, A. H. Robinson, Thomas J. O'Keefe and others, with a capital stock of \$1,000,000, to construct and establish gas works.

Nashville—Belting Factory.—The Nashville Belting Co. has purchased the tools and machinery of the Cumberland Valley Belting Co. and is prepared to manufacture leather belting of all kinds; office and factory No. 218 Front street.

Nashville—Saw-mill.—John B. Ransom & Co. will build a saw-mill of 50,000 feet capacity daily in addition to present plant.

TEXAS.

Alpine—Chartered: The W. D. Kincaid Company, with a capital stock of \$20,000, by

W. D. Kincaid, J. T. Williams and C. M. Dever.

Beaumont—House Factory.—It is proposed to organize a \$50,000 stock company for the erection of a factory to make portable dwelling-houses for shipment to countries in the warm climates; John Boyd is interested.

Call—Mill.—George Adams will rebuild burned mill.

Cleburne—Supply Company.—Chartered: The Texas Window Fixture & Supply Co., with capital stock of \$50,000, by C. C. Byers, B. F. Stokes and others.

Cleburne—Vehicle Company.—Chartered: The Brown Vehicle Co. by John C. Brown, J. H. Armstrong, W. I. Brown and others; capital stock \$5000.

Colmesneil—Lumber Company.—The Southwestern Lumber Co. has been organized, with D. R. Swift, president.

Corpus Christi—Steamboat Company.—Chartered: The Corpus Christi & Galveston Steamship Co., with capital stock of \$20,000, by N. Gussett, R. S. Blossman, H. Cohn and others.

Corsicana—Gas-piping Lines.—M. P. Cullinan and W. H. Staley are proceeding with the laying of pipes for conducting natural gas to consumers for heating and lighting purposes.

Corsicana—Oil Deposits.—T. C. Stribling is accredited with having struck lubricating oil on his land.

Dallas—Contract Company.—Chartered: The Texas Contract Co., with capital stock of \$2000, by T. Y. Nesbit, D. H. Morrow and J. M. Carter.

Farmersville—Water Works.—It has been decided by popular vote to issue \$20,000 of bonds for construction of water works previously reported. Address "The Mayor."

Fort Worth—Manufacturing Company.—The Evans & Simms Manufacturing Co. has been incorporated, with a capital stock of \$2000, by J. A. T. Evans, W. E. Simms and John W. Thain.

Galveston—Chartered: The Gulf Coast Oil Co., with capital stock of \$25,000, by Robert Bornefeld, C. H. Moore and James S. Waters.

Galveston—Chemical Company.—Chartered: The Galveston Chemical Co., with a capital stock of \$10,000, by John L. Knoll, B. P. Knoll, Edward McCarty and others.

Garrison—Cotton and Woolen Mill.—C. S. Baines is organizing a \$50,000 stock company to establish cotton and woolen mill.

Houston—Woodworking Factory.—Jas. C. Pridgen and others will put in operation the Acme Woodworking Factory.

Mobile—Lumber Company.—W. E. Trottie, B. A. Trottie and D. R. Swift have incorporated the Southwestern Lumber Co., with capital stock of \$100,000.

Port Lavaca—Road Improvements.—Calhoun county will issue \$50,000 of bonds for road improvements. Address "County Clerk."

Rusk—Electric-light Plant and Water Works.—T. C. Nuby will operate an electric-light plant, and contemplates constructing a system of water works. Address care of J. W. Summers.

Rusk—Textile Mill.—The Rusk Cotton and Woolen Mills, reported last week as forming, has organized, with T. C. Nuby, J. W. Summers, T. H. Cobble, Robert Pryor and others as directors. Company will erect building at once and install cotton and woolen machinery; T. C. Nuby, manager.

San Antonio—Drug Company.—A. L. Swearingen, George R. Ford, William King and others have incorporated the Swearingen Drug Co., with a capital stock of \$10,000.

Temple—Flour Mill.—Willig Bros. & Brockleley, now building a 40-barrel flour mill, contemplate making it a 100-barrel mill.

Waxahachie—Mercantile.—Chartered: The Brin Dry Goods Co., with capital stock of \$10,000, by Philip Brin and others.

VIRGINIA.

Berkley—Saw-mill.—E. H. Barnes has leased the old Maine Saw Mill, near Deep-creek, and is installing new machinery for cutting box slats; will also equip mill with new saws.

Exit—Lumber Company.—The Union Lumber Co. has been incorporated, with capital stock of \$5000, by C. L. Barham of Newport News, president; D. C. Lyon of Exit, secretary-treasurer.

Lynchburg—Paper-box Factory.—T. A. Jennings and M. C. Price will form the Lynchburg Paper Box Manufacturing Co. and establish a factory.

Newport News—Mercantile.—Incorporated: The Scioto Grocery Co., capital stock \$25,000; Geo. R. Dabney, president.

Petersburg.—The Virginia Coal-Saving & Heat-Regulating Co. has been incorporated, with capital stock of \$5000; W. B. McIlwaine, president.

Richmond.—Shipbuilding Plant.—The Wm. R. Trigg Company will enlarge and increase the capacity of its extensive plant.

Richmond.—The Old Dominion Motor Car Co. will be incorporated, with capital stock of not less than \$100,000, to operate automobiles; Capt. Andrew Pizzini, Jr., will be president and may be addressed.

Richmond.—Mineral-land Development.—The Pyco Mining Co. has been incorporated for the development of mineral property, with W. A. Price, president; S. W. Price, secretary; B. Y. Crump and others; capital stock to be \$5000.

Richmond.—Gas Works.—The city council has appropriated \$21,500 for the rehabilitation of the municipal gas-lighting plant. Address "The Mayor."

Richmond.—Plow Works.—The Watt Plow Co., A. C. Sinton, president, will build extensive foundry and machine works as soon as site can be selected.

South Boston.—Municipal Improvements.—The town has voted to issue \$10,000 in bonds for street and other municipal improvements. Address "The Mayor."

West Point.—Cellulose Factory.—It is stated that the Marsden Cellulose Co. of Philadelphia, Pa., has decided to locate its proposed new branch factory at West Point.

Whaleyville.—Dry-kilns.—The Jackson Bros. Co. has contracted for four large dry-kilns.

Winchester.—Coal Mining.—The Harloe-Rice-Bloes Coal & Iron Co. will develop, it is reported, over 50,000 acres of coal and iron lands it has optioned.

Zingara.—Flour Mill.—John H. Reed has awarded contract for a 40-barrel flour mill.

WEST VIRGINIA.

Cannellton.—Coal Mines, Coke Ovens, etc.—The Carbon Coal & Coke Co. (mentioned last week under Fayette county) has secured a lease on about 550 acres of coal lands, and the development of mines has begun. Company will build a coke plant of fifty beehive ovens, construct short-line railways, erect tipples, mining and crushing plant, etc. Address Carl Scholz, secretary, Mammoth, W. Va.*

Charleston.—Gas-pipe Line.—The Charleston Natural Gas Co. is reported as to pipe natural gas to Charleston from Racine.

Fairmont.—Coal Mining, etc.—The Cleveland & Fairmont Coal & Coke Co. has been incorporated by John A. Clark and others, with capital stock of \$100,000.

Flemington.—Electric Mining Plant.—The electric plant for mining and hauling being installed by the Flemington Coal & Coke Co. at a cost of \$50,000 is nearing completion.

Piedmont.—Coal Mines.—W. D. Althouse of Philadelphia, reported last week as developing coal mines at Piedmont, states that there is not any truth in the report.

Wayne.—Gas and Oil Company.—The Wayne Oil & Gas Co. has been incorporated, with capital stock of \$300,000, by H. H. Jackson, B. J. Prichard, William Fry, B. Mills, J. F. Graham.

West Virginia.—Glass Factory.—N. B. Scott has secured an option on the Hobbs Glass Works and is organizing a company to buy and operate the plant.

BURNED.

Brookhaven, Miss.—Albert Smith's steam gin; estimated loss \$25,000.

Cave, Tenn.—Burroughs & Taylor's woolen mill.

Courtland, Tenn.—H. D. Bynum's cotton gin.

Crystal Springs, Miss.—Crystal Springs Cotton Warehouse; estimated loss \$60,000.

Gadsden, Ala.—John R. Proctor's machine shops badly damaged.

Greensburg, La.—W. C. Harvell's cotton gin.

Helena, Ark.—Frank Forde's saw-mill.

Knoxville, Tenn.—The Knoxville Knitting Mills; loss \$25,000.

Lenoir, N. C.—Blue Ridge Bed Spring & Mattress Co.'s plant; estimated loss \$2000.

Natchez, Miss.—The Natchez Cotton Compress Co.'s plant, damaged by explosion to extent of \$30,000.

Panasoffkee, Fla.—Batchelor Cypress Lumber Co.'s dry-kiln; loss \$10,000.

Reno, Texas.—Kelly-Smith Gin Co.'s cotton gin; estimated loss \$5000.

Terrell, Texas.—J. C. Phillips' cotton gin; loss \$3000.

Terrell, Texas.—Cotton gin of I. N. Austin; loss \$2500.

Trion Factory, Ga.—Trion Manufacturing Co.'s saw-mill, planing mill and dryhouse; estimated loss \$4000.

BUILDING NOTES.

Angleton, Texas.—Residence.—J. S. Frost will erect residence.

Baltimore, Md.—Business Building.—Jacob Epstein will expend about \$150,000 for the erection of a 60x85-foot addition, with bridges and tunnel, after plans by J. E. Sperry; bids are in.

Benwood, W. Va.—Church.—Congregation of Lutheran church will expend \$10,000 to build a new edifice. August Schad can be addressed.

Birmingham, Ala.—Depot.—The Southern Railway will expend \$10,000 to enlarge and remodel its freight depot; Frank S. Gannon, manager, Washington, D. C.

Blooming Grove, Texas.—Educational.—Chartered: The Blooming Grove High School, with capital stock of \$6000, by S. W. Grimes and others.

Charleston, W. Va.—Hotel.—Stephen Riggs will build a hotel; plans to be prepared by Harrison Albright.

Chattanooga, Tenn.—Hospital.—A. S. Glover and others will incorporate the Southern Sanitarium and Magnetic Institute, with a capital stock of \$5000, to operate sanitarium.

Columbia, S. C.—City Hall and Opera-house.—The city council has adopted plans for a \$50,000 city hall and opera-house as proposed by Frank P. Milburn of Charlotte, N. C.; plans will be prepared at once and contract awarded in January.

Gastonia, N. C.—Business House.—Hook & Sawyer of Charlotte will prepare plans for a three-story business house for John Love of Gastonia.

Grifton, N. C.—Warehouses.—Bryan Gardner can probably give information concerning the proposed erection of two tobacco warehouses.

Hillsboro, Texas.—Warehouse.—O. J. Morris has awarded contract for erection of cotton-storage warehouse.

Hopkinsville, Ky.—Warehouse.—M. H. Tandy and A. H. Eckles will build a tobacco warehouse.

New Orleans, La.—Jail.—City Engineer Bell and H. W. Charlton are preparing plans for the proposed police jail; it will consist of three separate buildings, three stories high; in the basement of the main building will be located the heater and machinery-room, which will contain the boilers and machinery for heating building and the engine and pumps for operating laundry machinery and elevator.

Newport News, Va.—Stores.—B. D. Chandler will build store structures 25x97 feet.

Taylorsville, N. C.—Courthouse.—Hayden, Wheeler & Schwend will prepare plans and specifications for Alexander county's proposed courthouse; \$12,000 is available for the building.

Wheeling, W. Va.—Warehouse.—Wheeling Corrugating Co. has had plans prepared for a \$15,000 brick warehouse.

RAILROAD CONSTRUCTION.

Railways.

Anderson, Texas.—The right of way has been secured for the Texas Northern Railroad to be built between Anderson and Stoneham, Texas, a distance of twelve miles. L. McNair at Anderson is chief engineer.

Atlanta, Ga.—A. & C. Wright & Co. of Richmond, Va., have secured the contract for building the Atlanta Belt Line Railroad, recently referred to in the Manufacturers' Record. It represents about seven miles of track and will cost \$175,000.

Birmingham, Ala.—It is understood that the Louisville & Nashville Railroad Co. has recently made surveys for about eight miles of branches in Jefferson county, and will begin construction work on them in a few days. R. Montfort is chief engineer at Louisville, Ky.

Blakely, Ga.—It is announced that the Willis & Cole Lumber Co. has determined to build about six miles of branches to connect with its present line.

Bowling Green, Ky.—The Louisville & Nashville Railway Co., it is reported, will complete the double track, a portion of which has been laid, between Bowling Green and Memphis Junction. R. Montfort, at Louisville, Ky., is chief engineer of the company.

Bristol, Tenn.—The Holston Valley Railroad Co., it is reported, has let contracts for an extension three miles in length. W. T. Neeley is secretary of the company.

Caldwell, W. Va.—The exact length of the Greenbrier Valley Railway is ninety-five miles. It will extend from the Chesapeake & Ohio at Whitcomb Station, near Ronceverte, to the forks of the Greenbrier river. All contracts have been let and considerable of the route has been graded.

Caruthersville, Mo.—Messrs. Cunningham Bros., who are promoting the St. Louis, Caruthersville & Memphis Railroad, write the Manufacturers' Record that fifteen miles of this road, which will be twenty-seven miles long, are completed and it is calculated to have the extension finished by December 1. The necessary rails have been secured.

Corsicana, Texas.—It is expected to begin work upon the Corsicana & Gulf Valley Railway in the near future, as right of way has been secured for most of the distance. It will be built between Corsicana and Sabine Pass, and it is reported that Kountz Bros., bankers, of New York, are interested.

Dallas, Texas.—J. H. Carter, who is promoting the electric railroad between Dallas and Fort Worth, has asked the council of Oak Cliff for right of way through the city.

Dego, W. Va.—It is reported that a contract has been let for constructing the Kanawha & Pocahontas Railroad along the Paint Creek valley from Dego to a point sixteen miles distant. C. M. Pratt is president of the company and J. C. Carpenter at Clifton Forge, Va., has secured the contract.

Eldon, Mo.—Surveys are in progress for the proposed branch of the Missouri Pacific between Eldon and Springfield, through Dallas county, a distance of ninety miles. W. B. Doddridge, at St. Louis, is general manager of the company.

Ellaville, Fla.—Eugene West is reported as interested in a proposed railroad line from Ellaville through Taylor county to a point on the Gulf coast.

Florence, S. C.—The business men of Florence are agitating the question of securing a branch of the Seaboard Air Line to this city. They have been conferring with E. St. John, vice-president of the company, for this purpose.

Fort Worth, Texas.—The Chicago, Rock Island & Texas Railroad Co. has surveyed its proposed branch in the Indian Territory from Chickasha, along the Washita valley, to connect with the Santa Fe system. It is calculated also to build a branch from Fort Sill to Anadarko, a distance of thirty miles; another, fifteen miles in length, will be constructed also in the Indian Territory. S. B. Hovey, at Fort Worth, is vice-president of the company.

Geneva, Ala.—It is reported that the Alabama & Florida Railroad Co. is about to let contracts for the extension of the line from its present terminus to Geneva.

Jacksonville, Fla.—It is understood that the Jacksonville & Atlantic Railway Co. has contracted for the proposed extension from Pablo to Mayport, Fla., a distance of ten miles.

Jefferson, Texas.—A company has been formed to construct a railroad from Jefferson to Linden, Texas, a distance of twenty-five miles. It will be known as the Jefferson & Northwestern Railroad Co.

Lancaster, S. C.—The Chesterfield & Lancaster Railroad is projected from Cheraw to Lancaster by the way of Chesterfield. The entire length of the road is estimated at fifty miles and it has been partly surveyed. J. G. Redfearn, at Chesterfield, is president of the company.

Memphis, Tenn.—The Louisville & Nashville Railroad Co. is constructing a branch about two and one-half miles long in the suburbs of Memphis. It will be in operation by January 1.

Memphis, Tenn.—James Woods is promoting a railroad from Memphis to Knoxville and Harriman, to be known as the Tennessee Railway.

Moultrie, Ga.—A contract has been let to J. H. Davidson of Thomasville, Ga., for an extension of the Georgia Northern Railroad to Albany, Ga., from its present terminus. Work on the extension has already begun. J. T. Pidcock at Moultrie is president of the company.

Mount Airy, N. C.—An official of the Mount Airy & Eastern Railroad Co. writes the Manufacturers' Record that all contracts have been let for this line, which is to extend to Kibler, Va., a distance of twenty-two miles. T. N. Houston of Elkhorn, W. Va., is president of the company.

New Orleans, La.—The Texas & Pacific Railroad Co. has completed about eighteen miles of the branch between Port Allen and New Roads. The total length of the branch will be twenty-five miles. C. H. Chamberlain is engineer in charge.

Norfield, Miss.—The Natchez, Columbia & Mobile Railroad is being completed to a

point twenty-one miles northeast of Norfield. C. S. Butterfield is general manager of the company.

Norfolk, Va.—It is reported that the Norfolk & Ocean View Railway Co. has secured the right of way of what is known as the Cottage Railway, and will enter the city of Norfolk by this line when it is built. R. Lancaster Williams is president of the Ocean View Company.

Pensacola, Fla.—The Louisville & Nashville Railroad Co. has determined to build about one and one-half miles of track in addition to its present terminals on tide-water. R. Montfort, at Louisville, is engineer of the company.

Rockland, Texas.—The Southern Pacific Railway Co. solicits bids for building about fifteen miles of line between Rockland and Nacogdoches. J. T. Mahl, at Houston, Texas, may be addressed.

Sabine, Texas.—J. W. Brownlee, secretary of the railroad company promoting the line between Sabine and Port Arthur, states that surveys have been made and right of way secured. The road will be fifteen miles in length and connect with the Kansas City, Pittsburg & Gulf. Charles Sutter of St. Louis is president of the company.

Searcy, Ark.—It is announced that the Searcy & West Point and the Des Arc & Northern railway companies have combined, and that the proposed extension will be let to contract immediately. Henry Dalhoff of Little Rock, Ark., has secured the grading contract. The new work represents four miles of line. George C. Griffith at Bald Knob, Ark., is president of the company.

Shreveport, La.—The Texarkana, Shreveport & Natchez Railroad has been completed between Texarkana and Shreveport, and it is announced that the company has determined to extend it to Natchez, Miss., a distance of 150 miles, in the near future. B. Collins at Texarkana is general manager of the company.

Sparta, Tenn.—Van Buren county has voted a subscription of \$35,000 in stock in aid of the Tennessee Central Railroad, which is to be built through a portion of this county. Jere Baxter at Nashville is president of the company.

St. Louis, Mo.—G. P. Hoffman and John S. Busch are interested in the County Electric Transit Co., which has been formed to build a railroad in the suburbs of the city and is capitalized at \$140,000.

Wadley, Ga.—Surveys are being made for a branch of the Wadley & Mount Vernon Railway to the town of McRae. This line is now in operation between Wadley and Rixville. T. J. James, at Wadley, is president of the company.

Washington, D. C.—A. B. Linderman of Philadelphia, president of the Washington & Point Lookout Railroad Co., states that arrangements have been made to begin construction work during the present month.

Washington, D. C.—The latest announcement concerning the Washington & Potomac Railroad is to the effect that Charles B. Collier and others have formed a syndicate which has secured control of the line and will extend it from Mechanicsville, Md., to Point Lookout on Chesapeake bay, also from Brandywine, Md., the present terminus, to Washington.

Webb City, Mo.—A. H. Rogers, president of the Southwest Missouri Railway Co., writes the Manufacturers' Record that the company will build extensions from its present line aggregating about eleven miles. It is also making a number of improvements and additions to its power plants.

Street Railways.

Greenville, S. C.—The Greenville Traction Co., which announced it will build an electric road in the city, is capitalized at \$200,000. George M. Bunting, at Chester, Pa., is one of the stockholders.

Pine Bluff, Ark.—M. Roberts and John Georgian of Independence, Mo., have offered to construct an electric street railway, also a lighting plant, at Pine Bluff on certain conditions. It is probable that the charter will be granted.

Winston, N. C.—The Salem Railroad & Electric Co., which has secured control of the street railway and electric-light systems of Winston-Salem, it is reported, will make several extensions to the trolley system. H. E. Fries is president of the company; H. W. Fries and W. A. Blair, vice-presidents, and P. H. Pfohl, secretary and treasurer.

Gyrator Flour Mills.—The manufacturer of this system is the Wolf Company of Chambersburg, Pa., and its most recent orders called for remodeling 50-barrel mill in Pennsylvania; for entire new 40-barrel mill in Virginia; for entire 60-barrel mill in Pennsylvania, and for remodeling a 100-barrel mill.

Machinery, Proposals and Supplies Wanted.

Manufacturers and others in need of machinery of any kind are requested to consult our advertising columns, and if they cannot find just what they wish, if they will send us particulars as to the kind of machinery needed we will make their wants known free of cost, and in this way secure the attention of machinery manufacturers throughout the country. The MANUFACTURERS' RECORD has received during the week the following particulars as to machinery that is wanted.

Automobile Manufacturers.—W. H. Tharpe, Third avenue and Twentieth street, Birmingham, Ala., desires to communicate with manufacturers of automobiles.

Barrel Machinery.—See "Woodworking Machinery."

Boiler and Engine.—See "Woodworking Machinery."

Boiler and Engine.—Birmingham (Ala.) Hardware Manufacturing Co. will want small boiler and engine.

Bollers.—Savannah Valley Brick Co., Augusta, Ga., is in the market for a 75 to 100-horse-power return-tubular boiler; also for 10 or 15-horse-power locomotive boiler suitable for running jet pump, and for a clay-clod crusher.

Bollers.—National Fertilizer Co., Nashville, Tenn., is in the market for two second-hand tubular boilers sixty inches by sixteen feet.

Box Factory.—See "Woodworking Machinery."

Brick Machinery.—Savannah Valley Brick Co., Augusta, Ga., is in the market for clay-clod crusher.

Bridge.—Bids will be opened November 23 for the construction of bridge with draw; length of bridge 108 feet, of draw ninety feet; specifications have been completed. Address Jno. T. Capps and Abram Millett, city commissioners, Suffolk, Va.

Coke Ovens.—See "Mining Equipment."

Cooperage Stock.—Maryland Cement Co., 2 and 4 East Lexington street, Baltimore, Md., wants bids for supplies of staves, headings, flat and round hoops, linings, etc.

Cotton Mill.—Simon Baer, 906 English-American Building, Atlanta, Ga., wants to buy cotton-mill equipment, including 5000 to 50,000 spindles and complement of looms, boiler, engine, etc. Second-hand machinery will answer; preference given to machinery that has been or is now in a mill.

Cotton-rope Mill.—J. R. Shomaker, Cottondale, Fla., wants a small machine for making cotton rope.

Crusher.—See "Brick Machinery."

Electric-light Plant.—Mandeville Cotton Mills, Carrollton, Ga., is in the market for electric plant of 500 to 600 lights (incandescent).

Electric-light Plant.—The city of Tallahassee, Fla., will advertise for bids on the erection of an electric-light plant. Address "The Mayor."

Fire-department Equipment.—The city of Salisbury, N. C., wants to purchase a hose cart for fire department. Address S. F. Lord, mayor.

Handle Manufacturers.—Meyer, Johanson & Co., 138 Newhall street, Birmingham, England, want addresses of manufacturers of pick, sledge, axe and hatchet handles.

Ice Factory.—Geo. H. Bietel, Ponchatoula, La., wants to correspond with makers of ice machinery.

Laundry-supplies Factory.—Cowan-McCargo Co., R. W. McCargo, manager, Knoxville, Tenn., will soon be in the market for machinery to manufacture laundry blue and similar specialties.

Lumber.—Birmingham (Ala.) Hardware Manufacturing Co. will want lumber.

Lumber.—Porter Screen Manufacturing Co., Burlington, Vt., wants 500,000 feet bright saws, all one by four, fourteen and sixteen feet long.

Machine Tools.—Wisconsin Machine Co., Milwaukee, Wis., is in the market for two-inch bolt-cutter and nut-tapping machine; also a 20-inch by 10-foot bed screw-cutting engine lathe.

Mining Equipment.—Carbon Coal & Coke Co., Carl Scholz, secretary, Mammoth, W. Va., wants estimates on complete mining equipment, fifty beehive coke ovens, tipples, crushers, building materials, rails, etc.

Pulleys, etc.—See "Woodworking Machinery."

Railway Construction.—J. T. Mahl, Houston, Texas, solicits tenders for the construction of fifteen miles of railway; other particulars and specifications on application.

Railway Equipment.—St. Louis & Caruthersville & Memphis Railroad, Caruthersville, Mo., will buy more rails and locomotives.

Railway Supplies.—See "Mining Equipment."

Roofing.—Birmingham Hardware Manufacturing Co., Birmingham, Ala., will want iron roofing.

Sailing Ships.—Atlantic & Pacific Co., 421 Chestnut street, Philadelphia, Pa., is inviting proposals for the building of two sailing ships of 3000 tons capacity each.

Saw-mill.—Swansboro Lumber Co., Swansboro, N. C., wants to buy good second-hand band saw-mill, with three-block carriage (Prescott feed), and saw-fitting machines.

Starch Machinery.—Hyman Supply Co., New Berne, N. C., wants addresses of makers of machinery for manufacturing starch from white potatoes.

Stone (for jetties).—C. H. McKinstry, captain engineers, U. S. A., St. Augustine, Fla., will receive proposals until November 21 for delivering about 92,000 tons, more or less, of stone in place for jetties; information on application.

Sugar Mill.—Geo. H. Biegel, secretary, Ponchatoula, La., wants to correspond with manufacturers of machinery for central sugar mills.

Trunk Factory.—J. B. Harris, Box 477, Durham, N. C., wants catalogues and prices on machinery for manufacture of trunks and trimmings for same.

Wagon Wheels.—R. A. McAulay, Fort Meade, Fla., wants addresses of makers of metal wagon wheels.

Woodworking Machinery.—Hot Springs Barytes Co., M. H. Dingee, treasurer, Lynchburg, Va., wants prices on barrel-making machinery delivered at Hot Springs, N. C.

Woodworking Machinery.—Geo. H. Biegel, Ponchatoula, La., wants to correspond with makers of machinery for box factory.

Woodworking Machinery.—Geo. M. Henrie, Station "U," Chicago, Ill., wants 24-inch combined planer and matcher, 14-inch matcher, 24-inch circular resaw, self-feed rip saw, inside molder, band saw, pulleys, shafting, engine and boiler; second-hand in proper condition will answer.

Woodworking Machinery.—Piedmont Lumber Co., Charlotte, N. C., wants prices on second-hand two-saw gang edger and on hand-feed shingle machine.

Woodworking Machinery.—Scooba Lumber Co., Scooba, Miss., wants to buy a second-hand planer, molder and matcher.

Woodworking Machinery.—The Wiley Manufacturing Co., R. C. Postell, general manager, Macon, Ga., wants to correspond with manufacturers of machinery for making spindles and hoops (colled).

TRADE NOTES.

Superior Lubrication.—Engineers who make a trial of genuine Albany grease cheerfully acknowledge its superiority for lubricating purposes. L. T. Snell of Natick, Mass., writes under date of October 23 to Adam Cook's Sons, New York, sole manufacturers, as follows: "Your grease is all right. I have some of another make on hand. When used up will give you a call."

Steel-frame Construction.—The Raton Coal & Coke Co., Raton, New Mexico, whose plant was destroyed by fire last year, has completed a large steel-frame trestle, several steel-frame buildings, steel coal chutes and water tanks. Wm. B. Scafe & Sons, Pittsburg, Pa., had the contract for this work, also for furnishing a considerable quantity of corrugated-iron roofing and siding for several other buildings.

Second-hand Machinery Offered.—Machinery which, though second-hand, is in good operating condition, usually finds a ready market. There are many manufacturers and others who can utilize various machines that have been used before, providing, of course, that they are in good working condition. Mr. A. A. Le Laurin of Pine Bluff, Ark., has a line of machines, principally for woodworking, which he offers for sale; also has boilers, engines, etc.

Indicating Automatic Gauge.—The uncertainty in many patterns of water gauges has prompted the introduction of a new device. Long and careful study of the use of the water gauge by H. S. Graber of 412 Pine street, St. Louis, Mo., has resulted in the introduction of a patented indicating automatic water gauge, which is claimed to overcome the difficulties of other patterns. Mr.

Graber is manufacturing and marketing the device. The city of St. Louis water department lately adopted this gauge. Send for booklet.

Boiler-cleaning.—The Union Boiler Tube-Cleaner Co. of 237 Penn avenue, Pittsburg, Pa., has just completed contract for cleaning two Haxelton or Porcupine boilers having over 2000 tubes, one end of which is welded tight. These tubes were badly scaled and the closed end required a special tool of unique design, as well as the use of the regular flexible shaft. This concern claims to be the only one fully equipped with machinery, tools and expert operators to do this kind of work quickly, effectively and cheaply.

Complete Paint Manufactory.—One of the most complete paint manufactories in the country is that of the Detroit Graphite Manufacturing Co. of Detroit, Mich. The product of the company has a wide sale throughout the United States and has given satisfactory results wherever used. The company's new plant has been occupied since September; it is a five-story building, with a full equipment of machinery for graphite-paint manufacturing, power being supplied by a 60-horse-power Westinghouse dynamo, and on each floor there is a smaller dynamo in use. Apartments conducive to health and cleanliness are provided on each floor for the workmen.

Rope-drive Outfit in Cotton Factory.—One of many Southern cotton mills that has made extensive improvements this year is the Eagle and Phenix Mills of Columbus, Ga. Recently the factory has completed, among other improvements, the installation of jack-shafts and rope-drive outfits. The transmissions include two main drives of 700 horsepower each, one of 110 horsepower and two of ninety-five horsepower each, requiring over two miles of rope, all outdoor drives and on the Dodge American or continuous-winding system. In connection with these there is a large amount of auxiliary transmission machinery being applied to the factory. The Dodge Manufacturing Co. of Mishawaka, Ind., was awarded the contract for the execution of all the rope-transmission equipment referred to.

Continued Rush of Orders.—The Bullock Electric Manufacturing Co. of Cincinnati, Ohio, reports fifty-five orders for October, the machines ranging in size from the smallest to 300-kilowatt capacity. A repeat order was received from the Maryland Steel Co., this making the fifth order and being for a 200-kilowatt generator and several motors. Orders were received from the London (England) Star and St. Petersburg (Russia) Novia Wremla, two of the most important papers of the respective cities, for the Bullock "Teaser" equipment for operating newspaper presses. Two 300-kilowatt alternating-current generators were shipped to the Wilson Aluminum Co. of West Virginia, to be used in the manufacture of ferrochrome, an electro-chemical product used in the manufacture of chrome steel.

Reliable Boilers and Engines.—The reliability of machinery in general is one of the strong points that appeals to the buyer about to contract for apparatus. In the matter of steam-power plants it is especially desired to install only the most approved equipments. One of the most prominent builders of machinery in this line is the New York Safety Steam Power Co. of 107 Liberty street, New York city. The most recent shipments of this corporation were two two-inch, 30-section boilers to Havana, for use in government fortresses; 200-horse-power boiler in New York, three 125-horse-power units in New York apartment-house, three 100-horse-power units in St. Denis Hotel, New York. The company's vertical engines are constantly being shipped to all points, the latest order (for a pair of link-motion engines) having come from Key West, Fla.

An Exceptional Opportunity South.—One of the most exceptional opportunities for investment or for obtaining a home that can be a large producer of revenue is offered now. The offer in question is a water-power with 100 acres of land, partly improved with corn and wheat fields, and including a complete ginny doing a good paying business at present, which turned out 1200 bales of cotton last season. The property is situated not a mile from the Seaboard Air Line in Madison and Oglethorpe counties, Georgia; it is in the midst of a fine cotton-growing section of the State. It will be seen that the advantages as a site for cotton factory are all that could be desired. A thousand horsepower could be readily developed from the water-power, so the sellers claim. The property is to be sold publicly December 5 in front of courthouse at Lexington, Ga., if not sold at private sale before that date. For

further information address Messrs. Watson Bros. & Glenn of Carlton, Ga.

Machinery for Foreign Countries.—The Tanite Company of Stroudsburg, Pa., still continues the distribution of its machines among important works across the Atlantic. Only recently it made a shipment of its letter "D" machine for the government of the Netherlands. Now it has under consideration a large Russian order for its surfacing machines or guide bar grinders, such as were supplied a year or so since, through Manning, Maxwell & Moore, as part of the big American locomotive plant for Russia, and the same as was supplied, through R. Cameron & Co. of New York, to the government railways of New Zealand. It is also filling an order for an American firm for one of its two-wheeled No. 5 grinders (weighing over a ton), such as was originally designed for and supplied to the French government. The Tanite Company has in hand also a large order for emery wheels for Russia and another for New Zealand. During the present year the Tanite Company was awarded in this country one of the largest government contracts for emery wheels which has ever been given out.

Practical Arc-lamp Covering.—The Western Electrical Supply Co. of St. Louis, selling agents for the Adams-Bagnall enclosed arc lamps for all circuits, states that the factory, after exhaustive experiments lasting through a period of over two years, added to the unity of opinion as expressed by the trade generally, is convinced that the heavy pressed copper as applied by the Adams-Bagnall Company for arc-lamp cases is the most practical and natural covering for an arc lamp. Such a case made up in the form adopted by the Adams-Bagnall Company embodies rigidity, indestructibility and absence of weight. This case has been used on all of its latest products, and while the first cost is necessarily greater, the many advantages are so evident that the considerate and care-taking trade is quick to realize and welcome the change. The Western Electrical Supply Co. is pleased to add that calls for the heavy pressed-copper case lamp are decidedly on the increase, and the Adams-Bagnall arc lamp in this covering bids fair to have no recognized competitor with the people.

Device for Coaling Vessels at Sea.—The Navy Department has directed that the collier "Marcellus" and U. S. S. "Massachusetts" be fitted with the "conveyor" for coaling vessels at sea designed by the Lidgerwood Manufacturing Co. of New York, so that a trial of the device can be made outside Sandy Hook. The "Marcellus" has already been equipped, and tests made with the vessel docked at the Brooklyn Navy Yard have shown, as far as the conditions would admit, the entire practicability of the apparatus. The trials at sea will be made within a week or so, and it is expected will last several days, during which the capacity and limitations of the device will be thoroughly tested. The quick and safe coaling of vessels at sea has troubled the nations of the globe and occupied the attention of experts on the subject for years, and the result of the test will be awaited with unusual interest. If the "conveyor" proves able to do what the manufacturer and its friends confidently expect it will the Lidgerwood Manufacturing Co. is to be congratulated on the solution of a problem of vast importance, not only to the navy of the United States, but those of the entire world.

New in the Automobile World.—It is about as well established as anything can be that American inventors are determined to produce automobile vehicles of a practicability equal to that of any household convenience. Many inventors are now at work endeavoring to perfect the automobile, various powers being proposed for their running, such as acetylene gas, electricity, etc. The latest acquisition to the line of automobiles now on the market is one to be manufactured by the Auto-Acetylene Company of 13-21 Park Row, New York city. This concern has been quietly at work for some time past developing an automobile, and its experts have examined thoroughly the most practical automobiles of Europe with a view of profiting by any merits that those vehicles might possess. After two years of testing, modifying and perfecting its apparatus, the Auto-Acetylene Company offers its vehicle. The vehicles are claimed to be practical in the highest degree, economical of operation, absolutely safe from explosion, that they give forth no odor, and that in general they possess those qualities that are essential in the every-day use of such a carriage. One of the company's product, will be a miners' prospecting wagon, fitted with commissary department, an ore-crusher mounted on the truck so as to be connected with motor when wanted, an assay furnace, provision

for turning the seat into a bunk for two persons and culinary outfit. This vehicle is doubtless destined to have a most far-reaching sale. The Auto-Acetylene Company will have a large factory at Hyde Park, Boston, and at Greenpoint, N. Y., will have a factory for special vehicles and for general automobile repair work.

The Flemington Coal.—The mining industry constitutes one of the most important in the industrial world. The world-wide use of coal as a fuel daily increases, and users choose that coal which gives the best results for their purpose. West Virginia has been a producer for many years of coal that has found its way into all channels of industrial life. The Flemington coal ranks in quality with the best for heating, lighting and fuel, and is, moreover, claimed to be the best locomotive fuel produced; it is also a superior gas coal. The Flemington coal is the "Pittsburg Seam," and it is one of the famous coals of this country. About 500,000 tons of this coal was placed on Eastern and Western markets, and under most rigid tests for both steam and gas-producing purposes has invariably given the best results. The Flemington Coal & Coke Co. of Flemington, W. Va., which reorganized recently, with a capital stock of \$2,500,000, is developing its property of 2500 acres in the Flemington field, the vein being stated to be eleven feet thick, giving an area of 43,000 square feet to each acre, or 56,000,000 tons of coal on the lands. Daily shipments of 4000 tons are made. The new electrical plant that has been installed gives the company all the advantages that modern ingenuity and machinery-builders can offer, making its mining most economical. The company has for its president S. L. Simpson, a New York banker; Charles G. Cornell of New York, vice-president, and R. E. Leavitt, secretary. The directors are all prominent bankers and business men of New York and Baltimore. The New York offices are in the Hudson Building at 32 Broadway; branches in Chicago, Cleveland, Baltimore and Philadelphia. The shipping ports of the corporation will be Baltimore, Philadelphia, New York and Sandusky. Booklet on application.

Modern Vaults and Safes.—The financial world particularly and the business world in general is concerned in the constant efforts of manufacturers to perfect vaults and safes in which valuable papers, money, etc., may be stored. Safety from robbery and immunity from damage by fire to the enclosed valuables are prime requisites in a safe or vault. The ingenuity of safe manufacturers of this country has produced a line of product in this department that is not equalled by any made outside of the confines of the United States. The expanding conditions that the South is now experiencing will make a greatly-increased demand for the class of product in question. The conditions that are producing the intense activity now prevailing throughout the South is to make a greatly-increased demand from that section for safes, vaults and kindred equipment. In order to secure a fair share of this coming trade the York Safe & Lock Co. of York, Pa., has established commodious warehouses in Baltimore, Md. This corporation has been one of the most successful makers in its line for some years, and its product has been widely placed, always giving to patrons the satisfaction expected. The new warehouses are fitted with a line of safes, and necessary handling facilities are at hand. Contracts for all classes of vault work for banks, trust companies and other establishments are undertaken. And plenty of experience has the company had in this line, its most recent contracts including orders from most prominent Southern concerns. The York Safe & Lock Co. has recently supplied the following with steel vaults and necessary safes: Realty Trust Co., Baltimore; Union Bridge (Md.) Banking Co., Wadesboro (Md.) Savings Bank, Manchester (Md.) Bank, Union Mills (Md.) Savings Bank, G. H. Birnie & Co., bankers, Taneytown, Md., and South Cumberland (Md.) Savings Bank. The Baltimore branch of the company is at No. 33 S. Charles street.

TRADE LITERATURE.

To Interest Building-material Manufacturers.—Architects, contractors, manufacturers of building materials and others interested are invited to give attention to the Southern Building News of Memphis, Tenn. This is one of the South's representative journals in its class and its special annual number will be issued next month. Prospectus and full particulars may be obtained on application.

Worthington Pumps.—A special booklet in vest-pocket form has been issued by Henry R. Worthington of New York, in the belief

that it will be found a convenience by those who desire to keep informed generally as to the styles and patterns of the company's product. Worthington steam and electric pumps are well known all over the world, and this booklet's brief descriptions of standard types will be handy to those desiring its use. Fully descriptive catalogues may be had on application.

Buffalo Forge Co. Engines.—A new booklet just issued by the Buffalo Forge Co. of Buffalo, N. Y., presents engines and generators of this company's manufacture. One of the designs shown is a tandem compound center-crank engine, which embraces some new departures in design and construction; another is a side-crank engine recently introduced for direct connection to generator; a new type of Triumph Electric Co. generator and a marine electric-lighting engine are also shown. Send for booklet.

Some Machine Tools.—General activity is at present an important factor in the demand for machine tools. The iron industry in its various branches calls for a large amount of tools and requires for its conduct only the best tools that can be purchased. One of the principals in the tool-manufacturing world is the Standard Tool Co. of Cleveland, Ohio. This concern's latest catalogue is illustrative and descriptive of twist drills, reamers and taps, milling cutters and special tools, spring cutters, flat-spring and riveted keys, etc.

Ball-bearing Sheave Wheel.—In all establishments where sheave wheels find a place in the general equipment it is presumed improved apparatus find ready buyers. Owners of plants wherein such wheels are used will find of interest the catalogue of the Pennsylvania Block Co. of 209 North Second street, Philadelphia. This concern makes the Parkin ball-bearing sheave wheels, for which claims are made that should give the widest usage. General tackle blocks and supplies for all purposes are also touched upon in the catalogue.

Facts for Factory Folks.—Cleanliness and light are important features of a well-regulated factory. To secure these one of the materials generally used is whitewash or paint to whiten the interior of the building. A material now offered to supplant whitewash or paint is "Muresco," which costs no more and is claimed to be much superior in its results by reason of its inherent qualities, particulars of which are referred to in a leaflet entitled "A Few Facts for Factory Folks." Send for copy to Messrs. Benjamin Moore & Co., manufacturers, of 244 Water street, Brooklyn, N. Y.

Sprinkler Bulletin.—The September number of the "Sprinkler Bulletin" contains much news of interest to present and prospective users of sprinkler systems. A practical and complete sprinkler system confines the damage caused by fire to a limited area in thousands of cases. Many business men put in sprinkler systems not simply because of the protection from fire that is afforded, but rather as a financial investment, the saving in insurance premiums being considered as such. One large factory in Milwaukee, putting in a Grinnell sprinkler system at a cost of \$3900, saved more than \$2000 annually on its insurance payments. Send to the Grinnell Fire Extinguisher Co. of Providence, R. I., for copy of the bulletin mentioned.

Interesting to Bag, Rope and Twine Users. Upon first thought it is readily recognized what a large amount of twine, bags and rope is used annually in the industrial world. Not only in factories of many kinds, but in numberless business establishments, such goods find a constant place in the supplies needed for the conduct of business. A catalogue has been issued relative to the manufacture of bags, rope and twine that is in itself a model of artistic designing and effective printing, together with photographic reproductions. Messrs. John T. Bailey & Co. of Philadelphia have issued the catalogue mentioned. This house was established in 1857, and has gradually grown from that day of small beginning to the present commodious and most complete plant for the production of bags, rope and twine, and its importations of burlap find a wide sale in America. The catalogue, by the way, is bound in burlap. Messrs. Bailey & Co. manufacture bags of all descriptions for every known purpose, and offer a wide variety of quality and sizes from which an intending purchaser may choose. The equipment of machinery is not excelled, including printing presses for two or three colors, designing department for labels, stereotyping department, machine repair shops, blacksmith shop, etc. The factory produces annually about 7,500,000 pounds. Send for catalogue.

FINANCIAL NEWS.

The Manufacturers' Record invites information about Southern financial matters, items of news about new institutions, dividends declared, securities to be issued, openings for new banks, and general discussions of financial subjects bearing upon Southern matters.

New Corporations.

The Commercial Bank has been organized at Fulton, Mo., with \$25,000 capital stock, by James Morris and others.

The Commercial Bank has been organized at Chester, S. C., with A. G. Brice, president, and W. A. Eddy, cashier.

Ernest Lindsay and others have organized the St. Joseph Cattle Loan Co. at St. Joseph, Mo., capitalized at \$100,000.

C. C. Dean and B. O. McGee are interested in the bank of Leland, Miss., which has been incorporated and capitalized at \$15,000.

W. L. Miller is president of the Woodburn Loan Association, recently organized at Charleston, S. C. Its capital stock is \$150,000.

The Robertson County Bank & Trust Co. of Springfield, Tenn., recently organized, is capitalized at \$125,000. Among the directors are J. W. Brown and C. E. Bell.

It is reported that Henry Robinson of Jacksonville, Fla., is considering the plan of opening a bank at Ocala, Fla. Mr. Robinson is president of the Commercial Bank of Jacksonville.

The new insurance company at Charlotte, N. C., is called the Home Protection Insurance Co. John B. Kenney is president; D. W. Oates, vice-president, and D. R. Julian, secretary.

The bank being formed at Berkley, Va., is to be called the Merchants and Planters' Bank, and will be capitalized at \$25,000. Foster Black will act as president; A. H. Martin as vice-president, and Geo. T. Tilley, cashier.

The national bank being formed at El Paso, Texas, is to be capitalized at \$100,000. A. Oppenheimer of Austin is president; H. L. Newman, vice-president, and J. G. Lowden, cashier. It will be known as the Lowden National Bank, and will absorb the private banking house of H. I. Newman & Son.

New Securities.

The town of Savannah, Mo., will receive bids until November 11 for \$9000 worth of 4 per cent. bonds.

The people of Elkins, W. Va., have voted in favor of issuing \$30,000 in bonds for water-works purposes. Address the mayor.

The town of Farmersville, Texas, has voted in favor of issuing \$20,000 in bonds for water works. The mayor will give further information.

The Canton Distilleries Co. of Canton, Md., has decided to increase its capital stock from 600 shares to 1500 shares. The par value is \$100 per share.

The town of Donaldsonville, La., will vote December 5 on the question of issuing \$40,000 in bonds for public improvements. The mayor may be addressed.

Calhoun county, Texas, has voted in favor of issuing \$50,000 in bonds for improved roads. The board of commissioners may be addressed at Port Lavaca, Texas.

The town of South Boston, Va., has voted in favor of issuing the amount of \$10,000 for improvements. The town council may be addressed for further particulars.

Messrs. Mottu, De Witt & Co. of Norfolk recently sold \$100,000 worth of city bonds bearing 4 per cent. interest at 4 per cent. premium. The purchasers were local people.

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Bartow county, Georgia, will vote November 15 on the question of issuing \$30,000 in bonds for improvements. The commissioners' court may be addressed at Cartersville, Ga.

Logan C. Murray has been elected president of the American National Bank of Louisville, Ky., succeeding J. H. Lindenberg.

Screw-cutting Tools.—The increased activity throughout the mechanical world has brought with it a demand for all classes of machine tools and supplies that is promptly supplied by American manufacturers. One of the most frequently-used classes of tools includes those for screw-cutting, taps, dies, screw-plates, etc. The J. M. Carpenter Tap & Die Co. of Providence, R. I., manufactures the class of tools mentioned and offers to the using public a most complete line. The company's latest catalogue (No. 12) supplied on application.